REVISION HISTORY BG-3R CHASSIS

MODEL

KV-XA25M80
KV-XA25M83
KV-XA25N90

PART NO.: 9-872-250-01

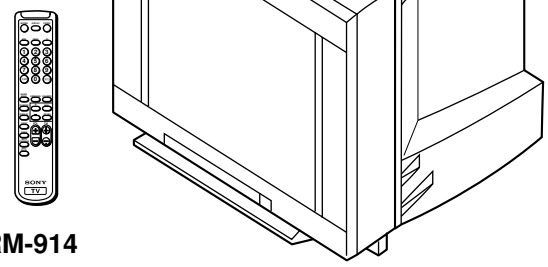
NO	DATE	DESCRIPTION OF REVISION

Self Diagnosis
Supported model

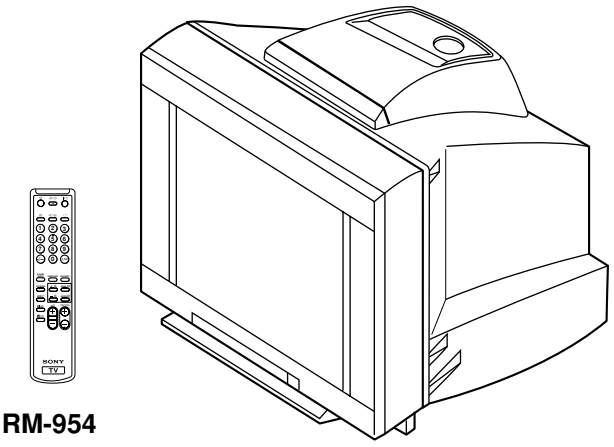
SERVICE MANUAL BG-3R CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-XA25M80	RM-954	Vietnam	SCC-U56C-A
KV-XA25M83	RM-954	Vietnam	SCC-U56E-A
KV-XA25N90	RM-914	Philippines	SCC-U51B-A

MODEL	COMMANDER	DEST.	CHASSIS NO.



RM-914



RM-954

TRINITRON ® COLOR TV

SONY ®

SPECIFICATIONS
(KV-XA25M83/XA25M80)

			Note
Power requirements	110-240 V AC, 50/60 Hz		
Power consumption (W)	Indicated on the rear of the TV		
Television system	B/G, I, D/K, M		
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58		
Channel coverage			
B/G	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41		
I	UHF: B21 to B68 / CATV: S01 to S03, S1 to S41		
D/K	VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 / CATV: Z1 to Z39, S01 to S03, S1 to S41		
M	VHF: A2 to A13 / UHF: A14 to A79 / CATV: A-8 to A-2, A to W+4, W+6 to W+84		
(Antenna)	75-ohm external terminal		
Audio output (speaker)	6W + 6W		KV-XA25M83
	8W + 8W		KV-XA25M80
3D Woofer	15W		KV-XA25M83 only
Number of terminal			
(Video)	Input: 4 *Output: 1	Phono jacks; 1 VP-P, 75 ohms	*Three input lines available
♪ (Audio)	Input: 4 *Output: 1	Phono jacks; 500 mVrms	*Three input lines available
(S Video)	Input: 2		Y: 1 Vp-p, 75 ohms, unbalanced, sync negative C: 0.286 Vp-p, 75 ohms
(Component Video)	Input: 1	Phono jacks;	Y: 1 Vp-p, 75 ohms, sync negative C_B: 0.7 Vp-p, 75 ohms C_R: 0.7 Vp-p, 75 ohms Audio: 500 mVrms
(Headphone)	Output: 1		Stereo minijack
Picture tube	25 inch		
Tube size (cm)	64		Measured diagonally
Screen size (cm)	60		Measured diagonally
Dimension (w/h/d, mm)	696 × 539 × 500		KV-XA25M83
	696 × 513 × 500		KV-XA25M80
Mass (kg)	40		KV-XA25M83
	38		KV-XA25M80

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SPECIFICATIONS
(KV-XA25N90)

	Note		
Power requirements	110-240 V AC, 50/60 Hz		
Power consumption (W)	Indicated on the rear of the TV		
Television system	M		
Color system	NTSC3.58, PAL*, PAL 60*, SECAM*, NTSC4.43*		*AV IN only
Stereo/Bilingual system	MTS		
Channel coverage	VHF: 2 to 13 / UHF: 14 to 69 / CATV: 1 to 125		
Antenna)	75-ohm external terminal		
Audio output (speaker)	8W + 8W		
Number of terminal			
VIDEO	Input: 4* Output: 1	Phono jacks; 1 V_{P-P}, 75 ohms	*Three input lines available
AUDIO	Input: 4* Output: 1	Phono jacks; 500 mVrms	*Three input lines available
S VIDEO	Input: 2		Y:1 Vp-p, 75 ohms, unbalanced, sync negative C: 0.286 Vp-p, 75 ohms
COMPONENT VIDEO (DVD) IN	Output: 1		Stereo minijack
Picture tube	25 inch		
Tube size (cm)	64		Measured diagonally
Screen size (cm)	60		Measured diagonally
Dimension (w/h/d, mm)	696 × 513 × 499		
Mass (kg)	38		

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANBY/TIMER lamp will automatically begin to flash.
The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1. DIAGNOSTIC TEST INDICATORS

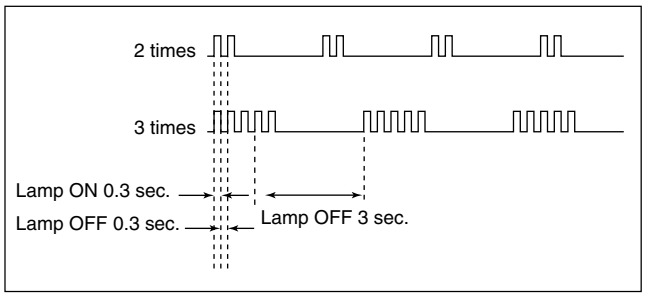
When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occured if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse is burned out F4601 (F)	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
• +B overcurrent (OCP) or overvoltage (OVP) • Vertical deflection stopped • Horizontal deflection overdrive	2 times	002:000 or 002:001~255 003:001~255 004:001~255 at the same time	• H.OUT Q511 is shorted. (A board) • Q701, Q702, Q703 is shorted (C6 board) • -13V is not supplied. (A board) • IC 503 faulty (A board)	• Power does not come on. • Load on power line is shorted. • Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
• White balance failure (no PICTURE)	5 times	005:000 or 005:001~225	• G2 is improperly adjusted. (Note 2) • CRT problem. • R(Q703), G(Q702) or B(Q701) out is faulty (C6 board) • IC301 is faulty. (A board) • No connection A board to C6 board.	• No raster is generated. • CRT cathode current detection reference pulse output is small.
• Micro reset	—	101:00 or 101:001~225	• Discharge CRT (C6 Board) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

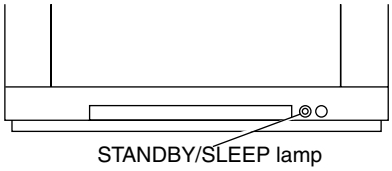
Note 1: If a + B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.
The symptom that is diagnosed first by the microcontroller is displayed on the screen.
Note 2: Refer to screen (G2) Adjustment in section 3-4 of this manual.
*R(Q703), G(Q702) or B(Q701) out is faulty (C6 board).

2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent/overvoltage Vertical deflection stopped	2 times
White balance failure	5 times

* One flash count is not used for self-diagnostic.



3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurances of failure for confirmation on the screen:

[To Bring Up Screen Test]

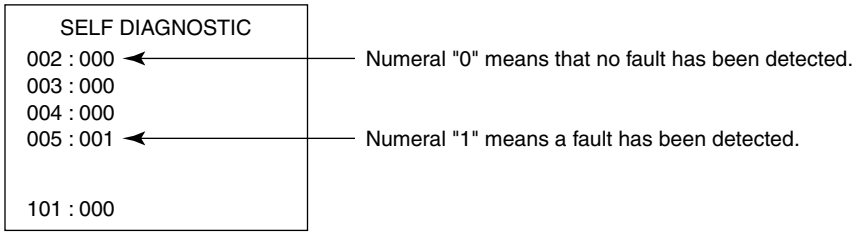
In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

Screen display ➡ channel 5 ➡ Sound volume - ➡ Power ON

⇧

Note that this differs from entering the service mode (mode volume [+]).

Self-Diagnosis screen display


SELF DIAGNOSTIC
002 : 000
003 : 000
004 : 000
005 : 001
101 : 000
Numeral "0" means that no fault has been detected.
Numeral "1" means a fault has been detected.

5. HANDLINGOF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]

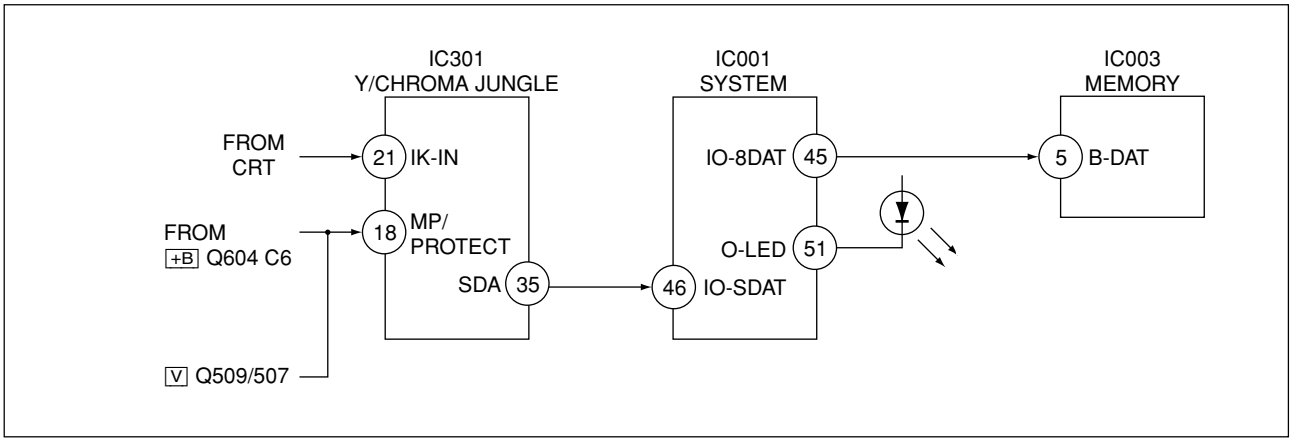
To clear the result display to “0”, press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] ➡ 0

[Quitting Self-diagnostic screen]

To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

6. SELF-DIAGNOSTIC CIRCUIT



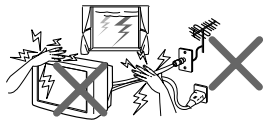
+B overcurrent (OCP)	Occurs when an overcurrent on the +B(135) line is detected by Q604. If Q604 go to ON and the voltage to pin 18 of IC301 should go down when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.
Vertical deflection stopped	Occurs when an absence of the vertical deflection pulse is detected by Q509 and IC001 shut down the power supply.
Vertical deflection overcurrent	Occurs when an overcurrent on V drive line is detected by Q507. Power supply will be shut down when detect this by IC001.
White balance failure	If the RGB levels* do not balance or become low level within 5 seconds, this error will be detected by IC301. TV will stay on, but there will be no picture. * (Refers to the RGB levels of the AKB detection Ref pulse that detects IK.)

SECTION 1-2
GENERAL
(KV-XA25M80/XA25M83)

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

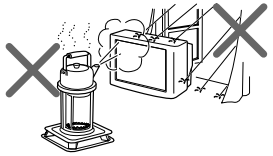
WARNING

- Dangerously high voltages are present inside the TV.
- TV operating voltage: 110 – 240 V AC.

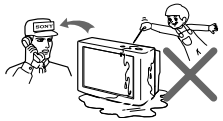


For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

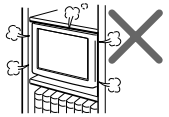
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



To prevent fire or shock hazard, do not expose the TV to rain or moisture.

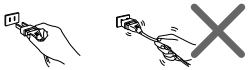


Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.

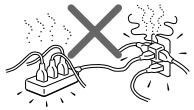


Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.

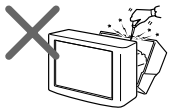
Clean the TV with a dry and soft cloth.
Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.



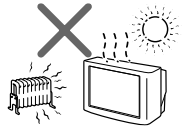
Pull the power cord out by the plug. Do not pull the power cord itself. Disconnect the TV before moving it or if you are not going to use it for several days.



Do not plug in too many appliances to the same power socket. Do not damage the power cord.



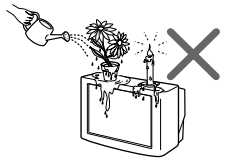
Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.



Your TV is recommended for home use only.
Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

WARNING (continued)

Do not install the TV in an unstable position.
Use a proper TV stand.



Do not place any objects on the TV.

Getting Started

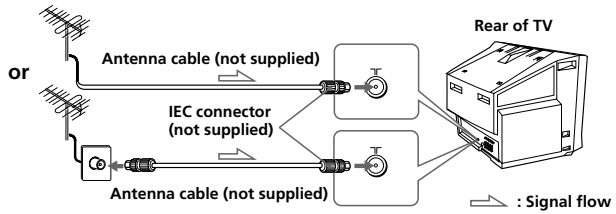
CAUTION

- Do not connect the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

Step 1

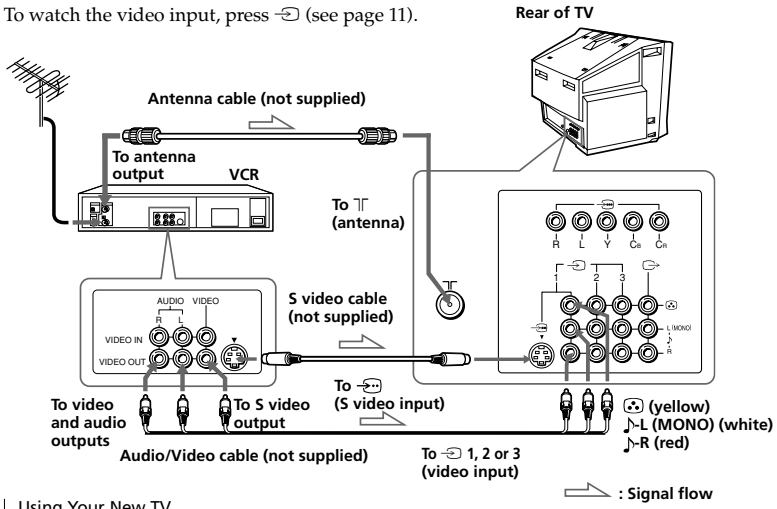
Connect the antenna

If you wish to connect a VCR, see the **Connecting a VCR** diagram below.



Connecting a VCR

To watch the video input, press (see page 11).

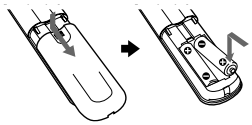


Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to L (MONO) (the white jack).
- If you connect a VCR to the (antenna) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- If both (S video input) and 1 (video input) at the rear of your TV are input at the same time, the (S video input) is automatically selected. To view the video input to 1 (video input), disconnect the S video cable.
- Do not connect video equipment to the 3 (video input) jacks at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.
- When no signal is input from the connected video equipment, the TV screen becomes blue.

Step 2

Insert the batteries into the remote

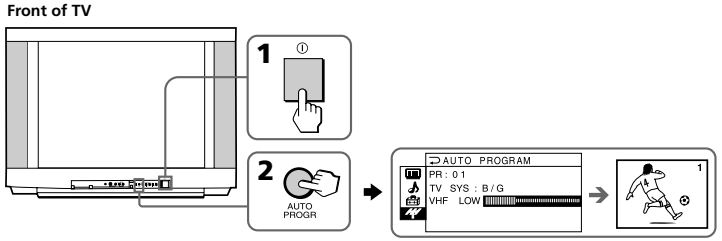


Note

- Do not use old batteries nor use different types of batteries together.

Step 3

Preset the channels automatically



Tips

- If you want to stop the automatic channel presetting, press MENU.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 25).

Note

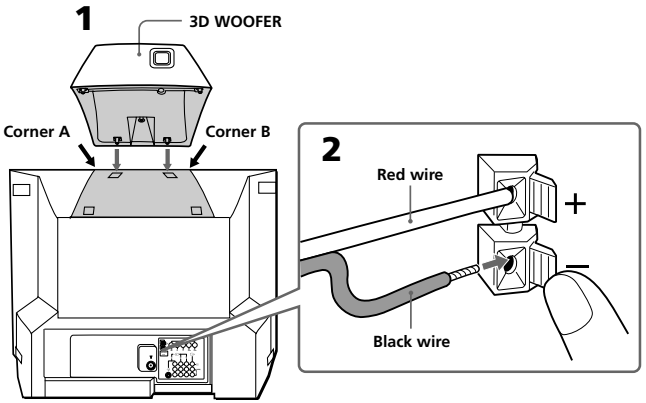
- During automatic channel presetting, your TV screen will indicate "B/G", "I", "D/K" or "M" for the TV system ("TV SYS").

KV-XA25M80/XA25M83/XA25N90
RM-954 RM-914

Connecting the 3D WOOFER

(KV-XA25M83 only)

You can enjoy high quality sound by connecting the 3D WOOFER.



1 Align the front of the 3D WOOFER to corners A and B of your TV. Place the 3D WOOFER into the footholds and adjust it until it is stable.

2 Connect the wires to the 3D WOOFER (8Ω) terminals at the rear of your TV. The red wire should be connected to the ⊕ red terminal and the black wire to the ⊖ black terminal.

Notes

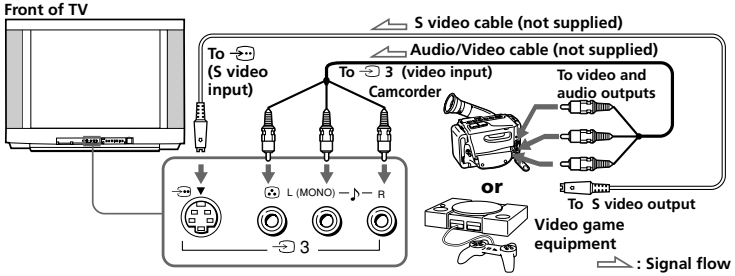
- Connect only the supplied 3D WOOFER; otherwise your TV may malfunction.
- Unplug your TV from the wall outlet when connecting the 3D WOOFER.
- To prevent a malfunction caused by a short circuit of the terminals, make sure that none of the 3D WOOFER wire strands stick out, making contact with the neighbouring speaker terminal.

Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, DVD, camcorder, video game or stereo system.

To watch the video input of the connected equipment, press ⊖ (see page 11).

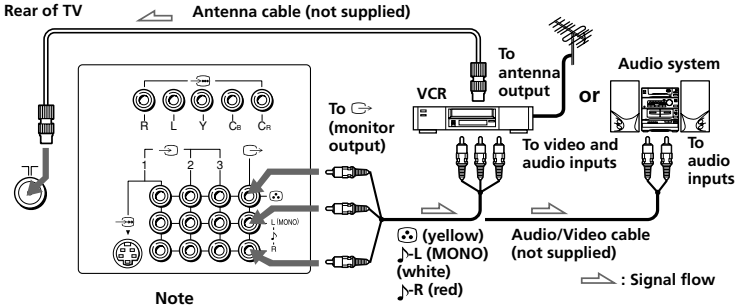
Connecting a camcorder/video game equipment using the ⊖ (video input) jacks



Notes

- You can also connect video equipment to the ⊖ 1, 2 or 3 (video input) jacks at the rear of your TV.
- If both (S video input) and ⊖ 3 (video input) at the front of your TV are input at the same time, the (S video input) is automatically selected. To view the video input to ⊖ 3 (video input), disconnect the S video cable.
- Do not connect video equipment to the ⊖ 3 (video input) jacks at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.

Connecting audio/video equipment using the ⊕ (monitor output) jacks



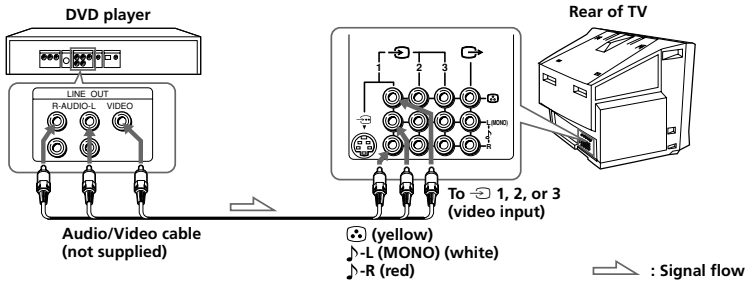
Note

- If you select "DVD" on your TV screen, no signal will be output at the ⊕ (monitor output) jacks (see page 11).

continued

Connecting Optional Components (continued)

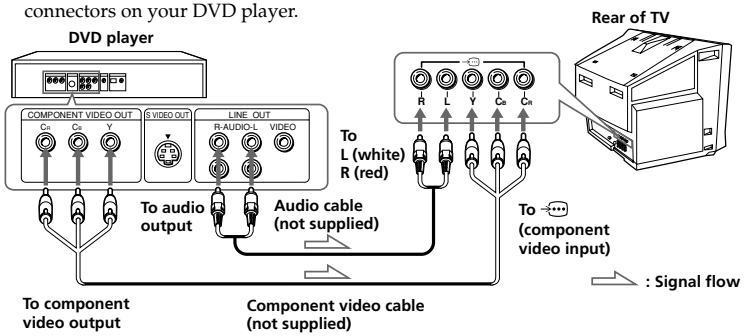
Connecting a DVD player using the (video input) jacks



Connecting a DVD player using the (component video input) jacks

1 Connect R and L under (component video input) on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.

2 Using a component video cable, connect Y, C_B, and C_R under (component video input) on your TV to the COMPONENT VIDEO OUT Y, C_B, and C_R output connectors on your DVD player.



Notes

- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C_B (blue)	C_b, B-Y or P_B
C_R (red)	C_r, R-Y or P_R

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") in the "ADJUST" menu of the "PICTURE MODE" menu (see page 19).
- Connect your DVD player directly to your TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

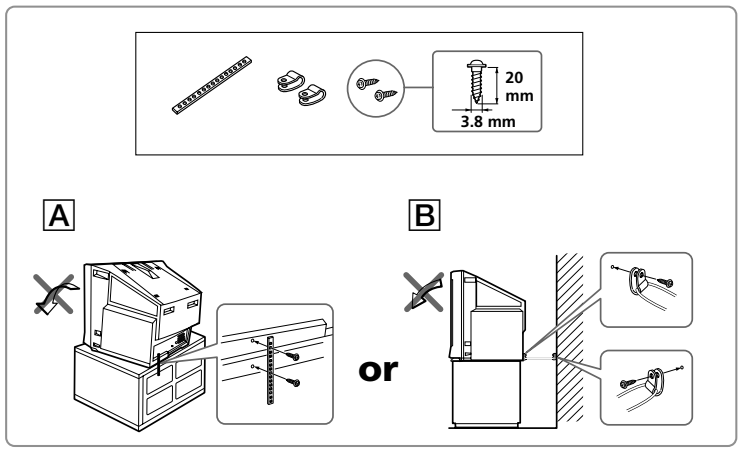
Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

A With the supplied screws, attach the band to the TV stand and to the rear of the TV using the provided hole.

or

B Put the cord or chain through the clamps to secure the TV against a wall or pillar.



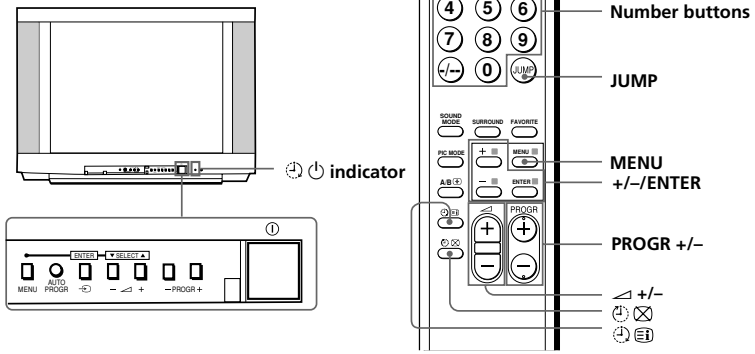
Note

- Use only the supplied screws. Use of other screws may damage the TV.

KV-XA25M80/XA25M83/XA25N90
RM-954 RM-914

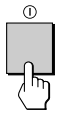
Watching the TV

This section explains various functions and operations available while watching the TV. Most operations can be done using the remote.



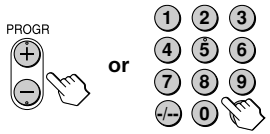
1 Press ⏻ to turn on the TV.

When the TV is in the standby mode (the ⏻ indicator on the TV is lit red), press I/⏻ on the remote or PROGR +/– on the TV.



2 Press PROGR +/– or number buttons to select the program number.

For double digit numbers, press -/--, then the number (e.g., for 25, press -/--, then 2 and 5).



To select a program number quickly

(1) Press and hold PROGR +/–.
(2) Release PROGR +/– when the desired program number appears.

Note

- When you select a program number quickly, the picture may be disrupted. This does not indicate a malfunction.

Additional tasks

To	Press
Turn off temporarily	I/⏻. The ⏻ indicator on the TV lights up red.
Turn off completely	⏻ on the TV.
Adjust the volume	+/–.
Mute the sound	.
Watch the video input (VCR, camcorder, etc.)	to select "VIDEO 1", "VIDEO 2" , "VIDEO 3" or "DVD". To return to the TV program, press (or on the TV).
Jump back to the previous program number	JUMP.
Display the on-screen information*	.

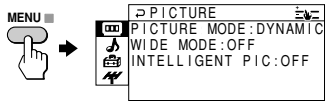
* The picture, sound, and either the program number or video input are displayed. The on-screen display for the picture and sound information disappears after about three seconds.

Changing the menu language

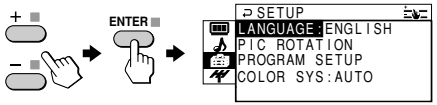
You can change the menu language as well as the on-screen language.

For details on how to use the menu, see **Introducing the menu system** on page 16.

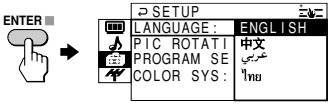
1 Press MENU.



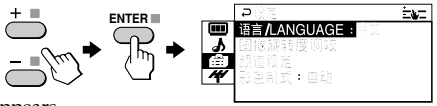
2 Press + or – to select the "SETUP" icon (), then press ENTER.



3 Make sure "LANGUAGE" is selected, then press ENTER.



4 Press + or – to select the desired language (e.g, " 中文 "), then press ENTER.



The selected menu language appears.

To return to the normal screen

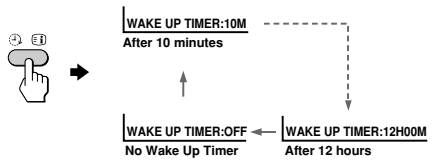
Press MENU.

continued

Setting the Wake Up timer

1 Press ◴ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



2 Select the program number or video input you want to display when you wake up.

3 Press ⏻ or set the Sleep timer if you want the TV to turn off automatically.

The ◴ indicator on the TV lights up orange.

To cancel the Wake Up timer

Press ◴ until "WAKE UP TIMER: OFF" appears or turn off the TV's main power.

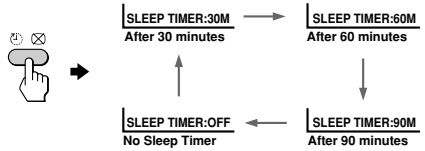
Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into the standby mode. To continue watching the TV, press any button or control on the TV or the remote.

Setting the Sleep timer

Press ◴ until the desired period of time appears.

The Sleep timer starts immediately after you have set it.

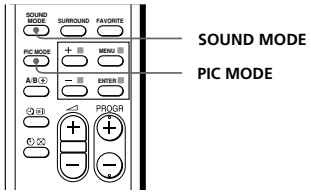


To cancel the Sleep timer

Press ◴ until "SLEEP TIMER: OFF" appears or turn the TV off.

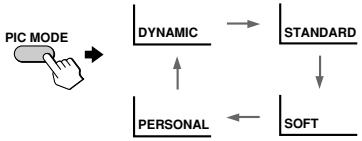
Selecting the picture and sound modes

You can select picture and sound modes and adjust the setting to your preference in "PERSONAL" option.



Selecting the picture mode

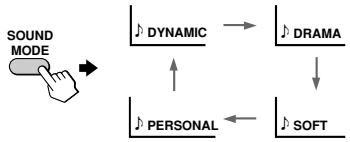
Press PIC MODE repeatedly until you get the desired picture mode.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal contrast pictures.
"SOFT"	receive mild pictures.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "PICTURE" menu (see page 19).

Selecting the sound mode

Press SOUND MODE repeatedly until you get the desired sound mode.



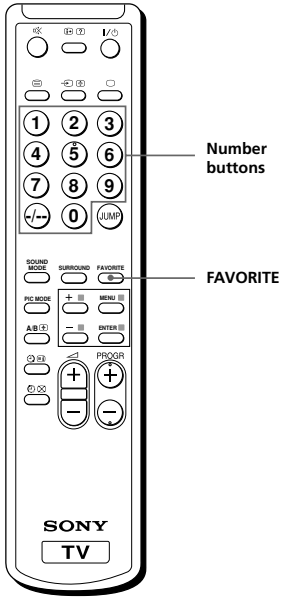
Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "SOUND" menu (see page 21).

Tip

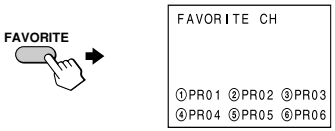
- You can also set the picture and sound modes using the menu (see **Changing the "PICTURE" setting** on page 18 and **Changing the "SOUND" setting** on page 20).

Viewing your favorite channels

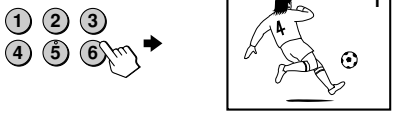
You can display and select six of your favorite channels directly from your TV screen.



1 Press FAVORITE.



2 Press the number button from 1 to 6 to select the desired favorite channel.

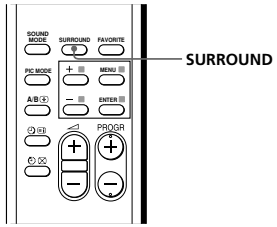


Tip

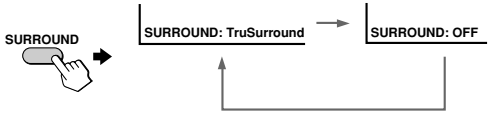
- To program your favorite channels, see **Adjusting each program number settings (PROGRAM SETUP)** on page 23.

Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press SURROUND repeatedly until you receive the desired surround sound.



Select	To
"TruSurround"	listen to the surround sound that spreads out to the rear of a room.
"OFF"	turn off the surround sound.

Tip

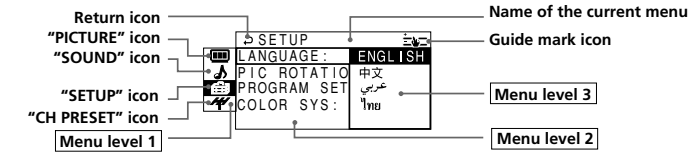
- You can also select the surround option using the menu (see **Changing the "SOUND" setting** on page 20).

The surround of your TV is categorized as TruSurround.

TruSurround™ is a trademark of SRS Labs, Inc. SRS and the SRS symbol are registered trademarks of SRS Labs, Inc. in the United States and selected foreign countries. SRS and TruSurround are incorporated under license from SRS Labs, Inc. and are protected under United States Patent Nos. 4,748,669 and 4,841,572 with numerous additional issued and pending foreign patents.

Introducing the menu system

The MENU button lets you open a menu and change the settings of your TV. Here's an overview of the menu system.

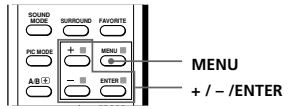


Level 1	Level 2	Level 3/Function
"PICTURE"	"PICTURE MODE"	Select the picture mode: "DYNAMIC"→ "STANDARD"→ "SOFT"→ "PERSONAL"→ "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR"→ "BRIGHT"→ "HUE"→ "SHARP"
	"WIDE MODE"	Change the picture size.
	"INTELLIGENT PIC"	Optimize picture quality.
"SOUND"	"SOUND MODE"	Select the sound mode: "DYNAMIC"→ "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE"→ "BALANCE"→ "BBE"*
	"SURROUND"	Select the surround mode: "TruSurround" → "OFF"
	"INTELLIGENT VOL"	Adjust volume automatically.
"SETUP"	"LANGUAGE"	Change the menu language: "ENGLISH" →"中文"(Chinese) → "عربي"(Arabic) → "ไทย" (Thai)
	"PIC ROTATION"	Rotate the picture.
	"PROGRAM SETUP"	Adjust each program number settings.
	"COLOR SYS"	Change the color system: "AUTO" → "PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"
"CH PRESET"	"AUTO PROGRAM"	Preset channels automatically.
	"MANUAL PROGRAM"	Preset channels manually.
	"TV SYS"	Change the TV system: "B/G" → "I" → "D/K" → "M"

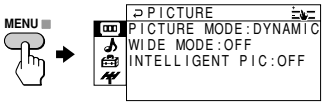
* The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.

How to use the menu

You can use the buttons on the remote and on the TV as well to display the menu and adjust the settings.



1 Press MENU to display the menu.



2 Press + or – to select the desired item.

3 Press ENTER to confirm your selection and go to the next menu level.

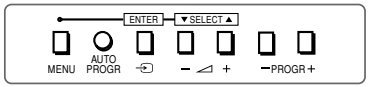
Other menu operations

To	Press
Adjust the setting value	+/–
Return to the previous menu level	ENTER
Cancel the menu	MENU

Tips

- To return from Menu Level 2 to Menu Level 1, press +/– to select the return icon (⮌), then press ENTER.
- Some of the menu items can be operated directly using the remote buttons.
- The MENU, ENTER, and SELECT ▼/▲ buttons on the TV can also be used for the operations above.

Front of TV



Note

- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

KV-XA25M80/XA25M83/XA25N90
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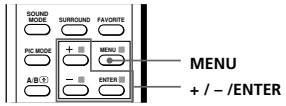
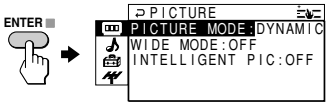
Changing the "PICTURE" setting



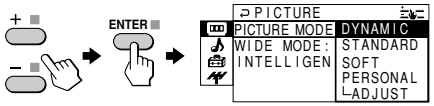
The "PICTURE" menu allows you to change the picture settings.

1 Press MENU.

2 Make sure the "PICTURE" icon ( ) is selected, then press ENTER.



3 Press + or – to select the desired item (e.g., "PICTURE MODE"), then press ENTER.



Select	To
"PICTURE MODE"	choose either "DYNAMIC", "STANDARD", "SOFT", "PERSONAL"*, or "ADJUST".
"WIDE MODE"	change the picture size when receiving wide-mode (16:9) picture signal. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.
"INTELLIGENT PIC"	optimize picture quality. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

* When the "PERSONAL" mode is selected, you can receive the last adjusted picture settings from the "ADJUST" option (see page 19).

Note

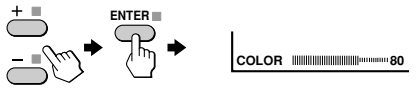
- For details on the options under "PICTURE MODE", see page 13.

To return to the normal screen

Press MENU.

Adjusting the "ADJUST" items under "PICTURE MODE"

1 Press + or – to select the desired item (e.g., "COLOR"), then press ENTER.



2 Adjust the value according to the following table, then press ENTER.

For	Press – to	Press + to
"PICTURE"	decrease picture contrast	increase picture contrast
"COLOR"	decrease color intensity	increase color intensity
"BRIGHT"	darken the picture	brighten the picture
"HUE"*	increase red picture tones	increase green picture tones
"SHARP"	soften the picture	sharpen the picture

* You can adjust "HUE" for the NTSC color system only.

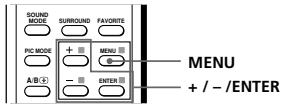
3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 16.

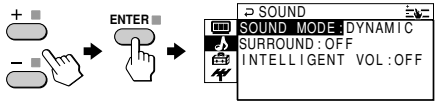
Changing the "SOUND" setting



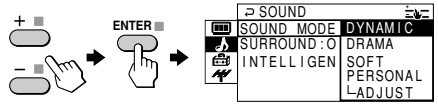
The "SOUND" menu allows you to change the sound settings.

1 Press MENU.

2 Press + or – to select the "SOUND" icon (♪), then press ENTER.



3 Press + or – to select the desired item (e.g., "SOUND MODE"), then press ENTER.



Select	To
"SOUND MODE"	choose either "DYNAMIC", "DRAMA", "SOFT", "PERSONAL"*, or "ADJUST".
"SURROUND"	choose either "TruSurround" or "OFF".
"INTELLIGENT VOL"	adjust the volume of all program numbers and video inputs automatically. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

* When the "PERSONAL" mode is selected, you can receive the last adjusted sound settings from the "ADJUST" option (see page 21).

Tip

- For details on the options under "SOUND MODE" and "SURROUND", see pages 13 and 15 respectively.

To return to the normal screen

Press MENU.

Adjusting the "ADJUST" items under "SOUND MODE"

1 Press + or – to select the desired item (e.g., "BALANCE"), then press ENTER.

2 Adjust the value according to the following table, then press ENTER.

For	Press – to	Press + to
"BASS"	decrease the bass	increase the bass
"TREBLE"	decrease the treble	increase the treble
"BALANCE"	increase the left speaker's volume	increase the right speaker's volume
"BBE"	select "HIGH" for higher enhancement of sound clarity; select "LOW" for lower enhancement of sound clarity; select "OFF" to turn off the BBE sound	

3 Repeat the above steps to adjust other items.

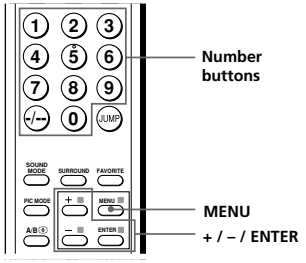
The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 16.

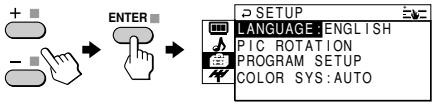
Changing the "SETUP" setting

The "SETUP" menu allows you to change the menu language, adjust the picture position, adjust the program number setting and select color system.

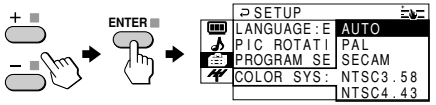


1 Press MENU.

2 Press + or – to select "SETUP" icon ( ), then press ENTER.



3 Press + or – to select the desired item (e.g., "COLOR SYS"), then press ENTER.



Select	To
"LANGUAGE"	change the menu language (see **Changing the menu language** on page 11).
"PIC ROTATION"	adjust the picture position when it is not aligned to the TV screen. Press + or – to adjust the picture position, then press ENTER.
"PROGRAM SETUP"	adjust each program number settings (see **Adjusting each program number settings (PROGRAM SETUP)** on page 23).
"COLOR SYS"	change the color system. Normally, set this to "AUTO".

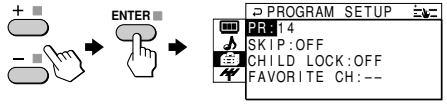
To return to the normal screen

Press MENU.

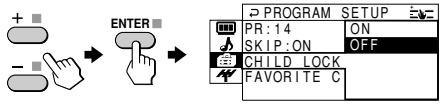
Adjusting each program number settings (PROGRAM SETUP)

1 Select "PROGRAM SETUP" from the "SETUP" menu.

2 Select "PR" and press ENTER. Press + or – to select the desired program number you want to adjust, then press ENTER.



3 Press + or – to select the desired item (e.g., "CHILD LOCK"), then press ENTER.



Select	To
"PR"	select the desired program number.
"SKIP"	skip unwanted or unused program number. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.
"CHILD LOCK"	prevent children from watching this selected program number. Press + or – to select "ON", then press ENTER. The lock symbol ( ) appears on the screen. To cancel, select "OFF", then press ENTER. If you preset a locked program number, that particular program number will be unlocked automatically.
"FAVORITE CH"	program favorite channels for direct selection. Press + or – to select one of the six favorite channel numbers (if you decide not to make any changes, select " ↩ "), then press ENTER. To view the selected favorite channel, refer page 14.

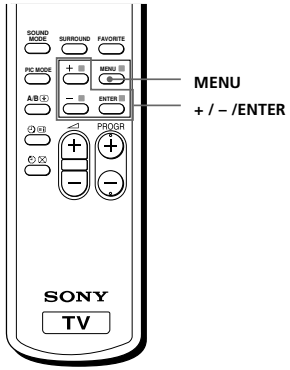
4 To continue adjusting other program number, press + or – to select "PR", then repeat step 2 and 3.

To return to the normal screen

Press MENU.

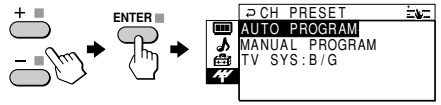
Changing the Channel Preset ("CH PRESET") setting

The "CH PRESET" menu allows you to adjust the setup of your TV. For example, you can receive a channel with a weak signal that fails to be tuned in by automatic presetting.

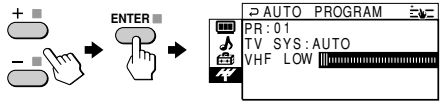


1 Press MENU.

2 Press + or – to select the "CH PRESET" icon (), then press ENTER.



3 Press + or – to select the desired item (e.g., "AUTO PROGRAM"), then press ENTER.



Select	To
AUTO PROGRAM	preset channels automatically.
MANUAL PROGRAM	preset channels manually (see **Presetting channels manually** on page 25).
TV SYS	change the TV system. Press + or – to select either "B/G", "I", "D/K" or "M", then press ENTER.

To return to the normal screen

Press MENU.

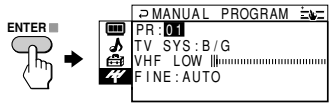
Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 16.

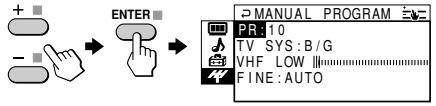
Presetting channels manually

1 After selecting "MANUAL PROGRAM", select the program number to which you want to preset a channel.

(1) Make sure "PR" is selected , then press ENTER.

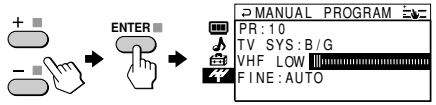


(2) Press + or – until the program number you want to preset (e.g., program number "10") appears on the menu, then press ENTER.

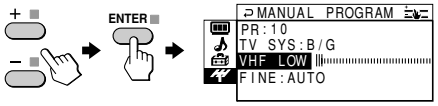


2 Select the desired channel.

(1) Make sure either "VHF LOW", "VHF HIGH" or "UHF" is selected, then press ENTER.

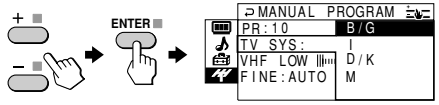


(2) Press + or – until the desired channel picture appears on the TV screen, then press ENTER.

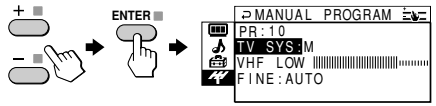


3 If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Press + or – to select "TV SYS", then press ENTER.



(2) Press + or – until the sound becomes normal (e.g., "M"), then press ENTER.

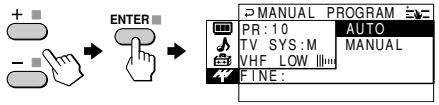


continued

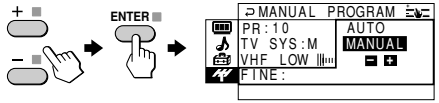
Changing the Channel Preset ("CH PRESET") setting (continued)

4 If you are not satisfied with the picture and sound quality, you may improve them by using fine tuning.

(1) Press + or – to select "FINE", then press ENTER.

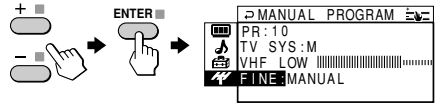


(2) Press + or – to select "MANUAL", then press ENTER.



(3) Press + or – until the picture and sound quality are optimal, then press ENTER.

The + or – icon on the menu flashes while tuning.



To return to the normal screen

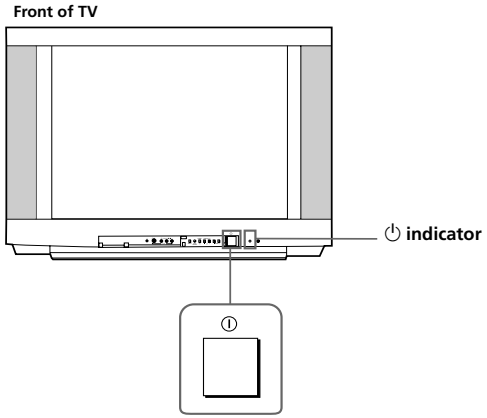
Press MENU.

Notes

- If you preset a locked program number ("CHILD LOCK"), that particular program number will be unlocked automatically (see page 23).
- The TV system ("TV SYS") and the fine tuning ("FINE") settings are memorized for each program number.

Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the ⏻ indicator flashes red. The number of times the ⏻ indicator flashes indicates the possible causes.



1 Check that the ⏻ indicator flashes red a number of times between 3-second intervals.

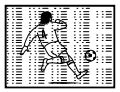
2 Count the number of times the ⏻ indicator flashes.

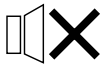
3 Press ⏽ (main power) to turn off your TV.

4 Inform your nearest Sony service center about the number of times the ⏻ indicator flashes.
Be sure to note the model name and serial number located on the rear of your TV.

Troubleshooting

If you find any problem while viewing your TV, please check the following guide. If any problem persists, contact your Sony dealer .

Symptom	Possible cause	Solutions	Page
Snowy picture  **Noisy sound** 	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• Channel presetting is inappropriate or incomplete.	• Display the “CH PRESET” menu and select “MANUAL PROGRAM” to preset the channel again.	25
	• The antenna type is inappropriate.	• Check the antenna type (“VHF”/“UHF”). Contact a Sony dealer for advice.	–
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture **Noisy sound** 	• Broadcast signals are too strong.	• Turn off or disconnect the booster if it is in use.	–
Good picture **Noisy sound** 	• The TV system setting or channel presetting is inappropriate or incomplete.	• If the sound of all the channels are noisy, display the “CH PRESET” menu and check the TV system (“TV SYS”) setting, then select “AUTO PROGRAM” to preset the channels again. • If the sound of some channels are noisy, select the channel, then display the “CH PRESET” menu and select the appropriate TV system (“TV SYS”).	24 24
No picture **No sound** 	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	4
	• The TV is not turned on.	• Press I/⏻ (power). • Press ⏻ (main power) on the TV to turn off the TV for about five seconds, then turn it on again.	10 10

Symptom	Possible cause	Solutions	Page
Good picture **No sound** 	• The volume level is too low.	• Press 🔊 + to increase the volume level.	11
	• The sound is muted.	• Press 🔇 to cancel the muting.	11
Dotted lines or stripes 	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or “ghosts” 	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning (“FINE”) function.	– 26
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color 	• The color level setting is too low.	• Display the “PICTURE” menu and select “ADJUST” of “PICTURE MODE”, then adjust the “COLOR” level.	19
	• The color system setting is inappropriate.	• Display the “SETUP” menu and check the color system (“COLOR SYS”) setting (usually set this to “AUTO”).	22
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
Abnormal color patches 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth’s magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. Do not move the TV while the TV is turned on. Press ⏻ (main power) on the TV to turn off the TV for about five minutes, then turn it on again.	–

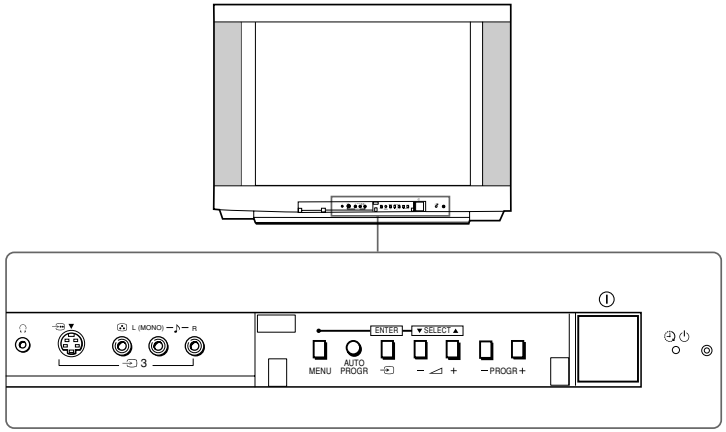
continued

Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Picture slant	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. • Display the "SETUP" menu and adjust "PIC ROTATION" so that the picture is aligned to the TV screen.	– 22
Lines moving across the TV screen.	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning ("FINE") function.	26
The ⏻ indicator on your TV flashes red a number of times between 3-second intervals.	• Your TV may need service.	• Contact your nearest Sony service center.	27
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.	—	–
A "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.	—	–

Overview of controls

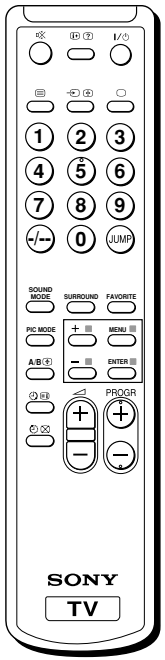
TV front panel



Button	Function	Page
AUTO PROGR	Preset channels automatically.	5
⏻	Turn off completely or turn on the TV.	10
PROGR +/–	Select program number.	10
⏻	Standby indicator	10
◿ +/–	Adjust volume.	11
⏎	Select TV or video input.	11
🕘	Wake Up indicator	12
Menu operations		
MENU	Display the menu.	17
SELECT ▾/▴	Select and adjust items.	17
ENTER	Confirm selected items.	17
🎧	Headphones jack.	–

continued

Remote control



Names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

Label color	Button function
White	For general TV operations
Green	For Teletext operations

Button	Function	Page
I/⏻	Turn off temporarily or turn on the TV.	10
PROGR +/–	Select program number.	10
0 – 9, -/--	Input numbers.	10
🔊 +/–	Adjust volume.	11
⏎	Select TV or video input.	11
▢	Display the TV program.	11
🔇	Mute the sound.	11
ⓘ	Display on-screen information.	11
JUMP	Jump to previous program number.	11
Timer operations		
🕘	Set TV to turn on automatically.	12
🕘	Set TV to turn off automatically.	12
PIC MODE	Select picture mode.	13
SOUND MODE	Select sound mode.	13
FAVORITE	Display favorite channels.	14
SURROUND	Select surround mode.	15
Stereo/bilingual operations (Not used for these models)		
A/B	Select stereo/bilingual mode.	–
Teletext operations (Not used for these models)		
▤	Display Teletext broadcast.	–
⊕	Enlarge the Teletext display.	–
?	Reveal concealed information.	–
⊕	Stop Teletext display from scrolling.	–
▤	Display Teletext service contents.	–
⊠	Show TV screen while waiting for Teletext page.	–
0 – 9	Input Teletext page number.	–
PROGR +/–	Display the next or previous page.	–
■ (red, green, yellow, blue)	Access a Fastext menu	–
Menu operations		
MENU	Display the menu.	17
+ or –	Select and adjust item.	17
ENTER	Confirm selected item.	17

SECTION 2-2
GENERAL
(KV-XA25N90)

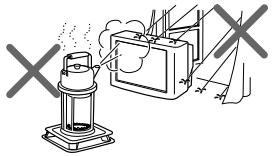
The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

WARNING

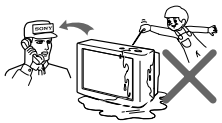
- Dangerously high voltages are present inside the TV.
- TV operating voltage: 110-240 V AC.

For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

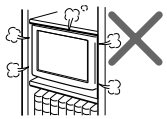
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



To prevent fire or shock hazard, do not expose the TV to rain or moisture.

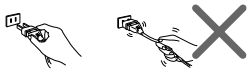


Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



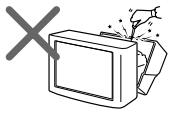
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.

Clean the TV with a dry and soft cloth. Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.

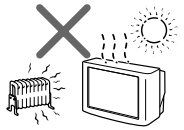


Pull the power cord out by the plug. Do not pull the power cord itself. Disconnect the TV before moving it or if you are not going to use it for several days.

Do not plug in too many appliances to the same power socket. Do not damage the power cord.

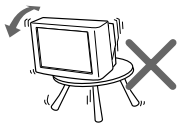


Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.

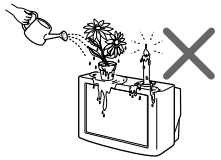


Your TV is recommended for home use only. Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

WARNING (continued)



Do not install the TV in an unstable position. Use a proper TV stand.



Do not place any objects on the TV.

Getting Started

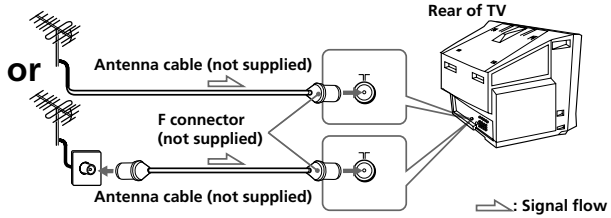
CAUTION

- Do not connect the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

Step 1

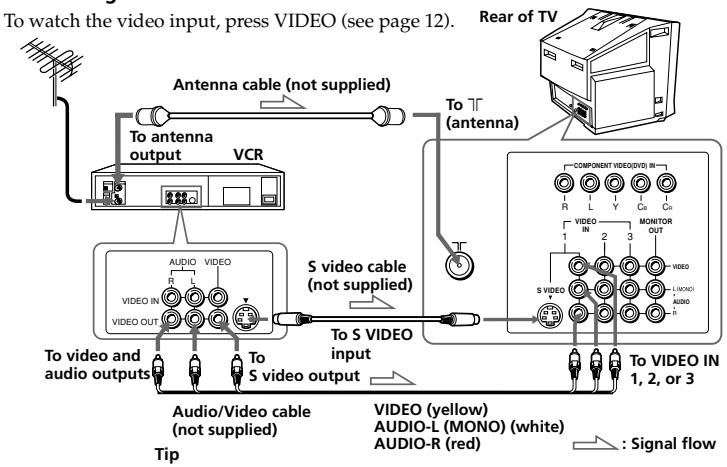
Connect the antenna

If you wish to connect a VCR, see the **Connecting a VCR** diagram below.



Connecting a VCR

To watch the video input, press VIDEO (see page 12).



Tip

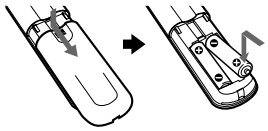
- With the "VIDEO MULTI SYSTEM" input terminal, you can also receive PAL, NTSC and SECAM video signals when using the VIDEO IN 1, 2 or 3 jacks, or the VIDEO 3 INPUT jacks at the front of your TV.

Notes

- If you connect a monaural AUDIO VCR, connect the yellow plug to VIDEO (the yellow jack) and the black plug to AUDIO-L (MONO) (the white jack).
- If you connect a VCR to the (antenna) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- When both the S VIDEO and VIDEO IN 1 input are connected, the S VIDEO input is automatically selected. To view the video input to VIDEO IN 1, disconnect the S video cable.
- Do not connect video equipment to the VIDEO 3 INPUT jacks at the front and VIDEO IN 3 (video input) jack at the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.
- When no signal is input from the connected video equipment, the TV screen becomes blue.

Step 2

Insert the batteries into the remote

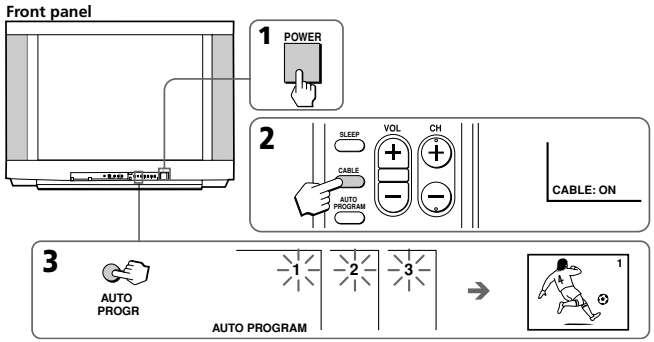


Note

- Do not use old batteries or different types of batteries together.

Step 3

Preset the channels automatically



Tips

- To stop the automatic channel presetting, press MENU.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 10).
- The AUTO PROGRAM button on the remote works as the AUTO PROGR button on the TV.

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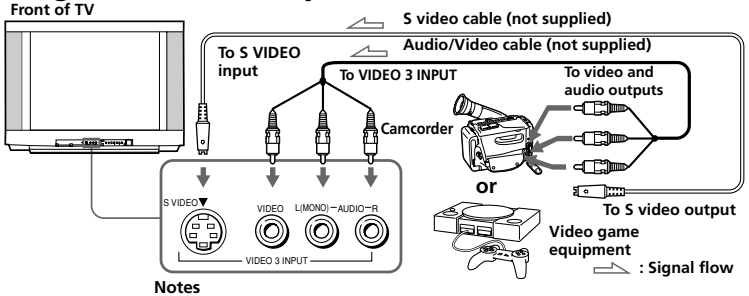
Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, DVD, camcorder, video game, or stereo system.

To watch the video input from the connected equipment, press VIDEO (see page 12).

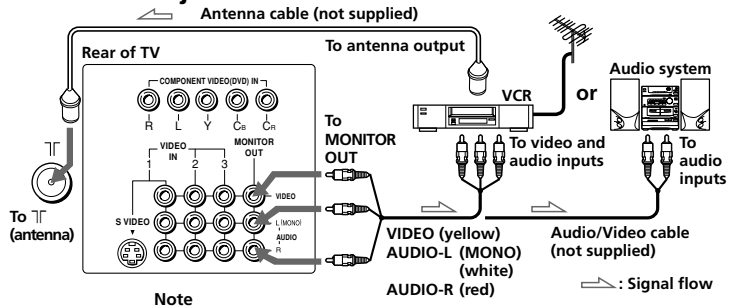
Connecting a camcorder/video game equipment using the VIDEO 3 INPUT jacks



Notes

- With the "VIDEO MULTI SYSTEM" input terminal, you can also receive PAL, NTSC and SECAM video signals when using the VIDEO IN 1, 2 or 3 jacks at the rear of your TV, or the VIDEO 3 INPUT jacks.
- When both the S VIDEO input and VIDEO 3 INPUT at the front of your TV are input at the same time, the S VIDEO input is automatically selected. To view the video input to VIDEO 3 INPUT, disconnect the S video cable.
- You can also connect video equipment to the VIDEO IN 1, 2, or 3 jacks at the rear of your TV.
- Do not connect video equipment to the VIDEO 3 INPUT jacks at the front and the VIDEO IN 3 jacks at the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.

Connecting audio/video equipment using the MONITOR OUT jacks

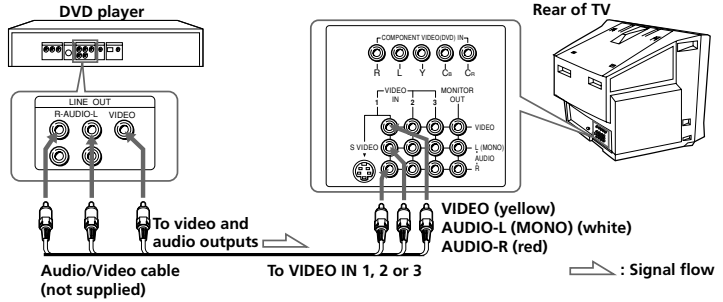


Note

- If you select "DVD" on your TV screen, no signal will be output at the MONITOR OUT jacks (see page 12).

Connecting a DVD player using the VIDEO IN 1, 2 or 3 jacks

Connect VIDEO IN 1, 2 or 3 AUDIO/VIDEO connectors on your TV to LINE OUT on your DVD player.



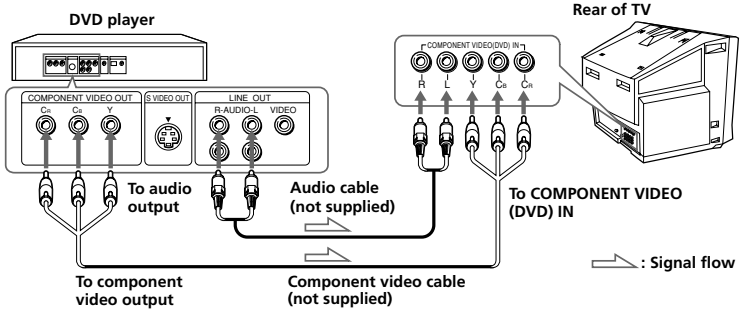
Notes

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") under "PERSONAL ADJUST" in the "PICTURE MODE" menu (see page 21).
- Connect your DVD player directly to your TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

continued

Connecting a DVD player using the COMPONENT VIDEO (DVD) IN jacks

1 Using an audio cable, connect R and L under the COMPONENT VIDEO (DVD) IN jacks on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.
2 Using a component video cable, connect Y, C_B, and C_R under the COMPONENT VIDEO (DVD) IN jacks on your TV to the COMPONENT VIDEO OUT Y, C_B, and C_R output connectors on your DVD player.
3 Press VIDEO on the remote or TV/VIDEO on the TV until "DVD" appears on the screen.



Notes

- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C_B (blue)	C_b, B-Y or P_B
C_R (red)	C_r, R-Y or P_R

- When connecting to the COMPONENT VIDEO (DVD) IN jacks on your TV, you must connect Y, C_B, and C_R to receive the video signals, and connect L and R to receive analog audio signals.

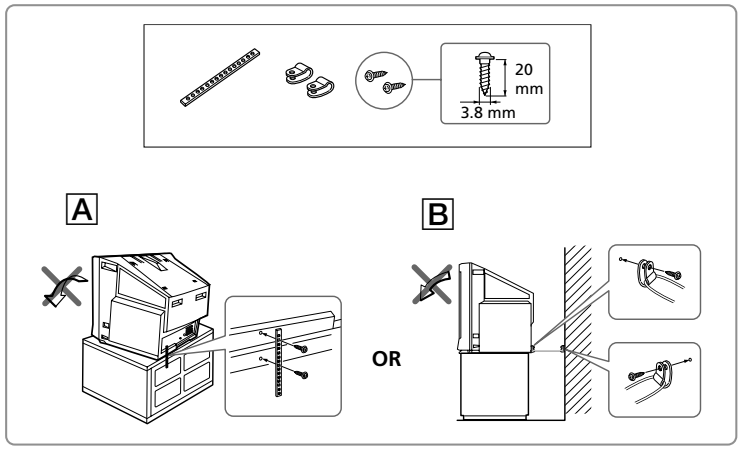
Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

A With the supplied screws, attach the stabilizer band to the TV stand and to the rear of the TV using the provided hole.

OR

B Put the cord or chain through the clamps to secure the TV against a wall or pillar.



Note

- Use only the supplied screws. Use of other screws may damage the TV.

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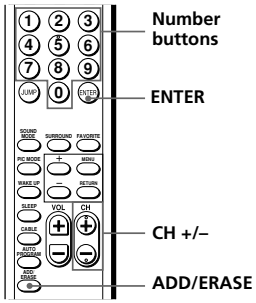
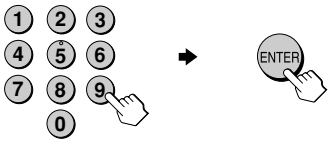
Presetting the channels manually



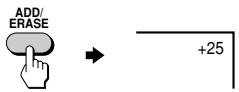
To receive a new channel or a channel with a weak signal, preset the channel manually.

1 Press number buttons to select the desired channel number, then press ENTER.



2 Press ADD/ERASE.

"+" appears beside the channel number, indicating that presetting is complete.



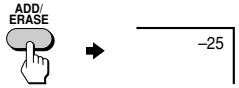
Disabling channel numbers

By disabling unused or unwanted channel numbers, you can skip those channel numbers when you press CH +/–.

1 Press CH +/– until the unused or unwanted channel number appears on the screen.

2 Press ADD/ERASE.

"–" appears beside the channel number, indicating that disabling is complete.



To cancel the skip setting

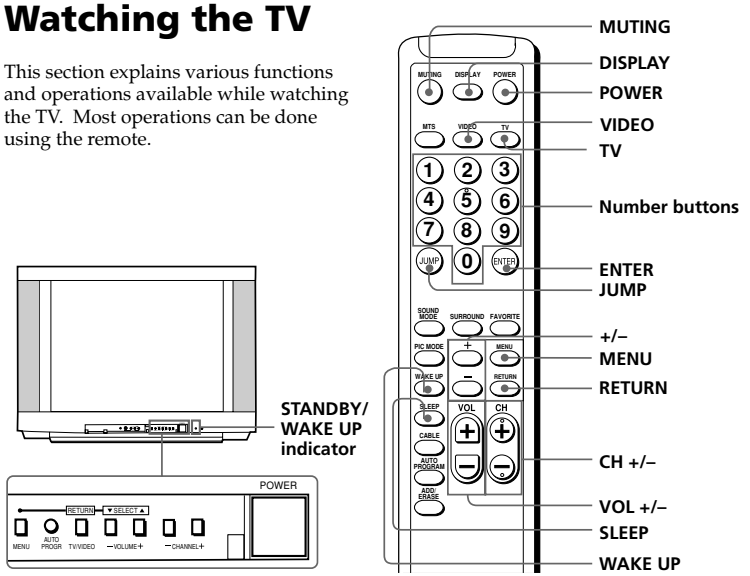
Preset the channel again.

Tip

- You can also preset the channels manually using the menu (see **Adjusting each channel number settings (CHANNEL SETUP)** on page 25).

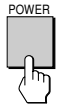
Watching the TV

This section explains various functions and operations available while watching the TV. Most operations can be done using the remote.

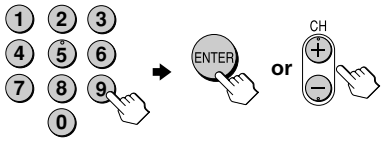


1 Press POWER to turn on the TV.

When the TV is in standby mode (the STANDBY indicator on the TV is lit red), press POWER on the remote or CHANNEL +/– on the TV.



2 To select the channel number, press the number buttons and then press ENTER, or press CH +/–.



To select a channel number quickly

(1) Press and hold CH +/–.
(2) Release CH +/– when the desired channel number appears.

Note

- When you select a channel number quickly, the picture may be disrupted. This does not indicate a malfunction.

continued

Additional tasks

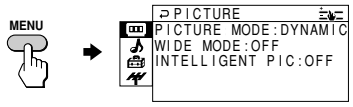
To	Press
Turn off temporarily	POWER. The STANDBY indicator on the TV lights up red.
Turn off completely	POWER on the TV.
Adjust the volume	VOL +/–.
Mute the sound	MUTING.
Watch the video input (VCR, camcorder, etc.)	VIDEO (or TV/VIDEO on the TV) to select "VIDEO 1", "VIDEO 2", "VIDEO 3" or "DVD". To return to the TV screen, press TV (or TV/VIDEO on the TV).
Jump back to the previous channel number	JUMP.
Display the on-screen information*	DISPLAY.

* Some picture/sound settings, and either the program number or video mode are displayed. The on-screen display for the picture/sound settings disappears after about 3 seconds.

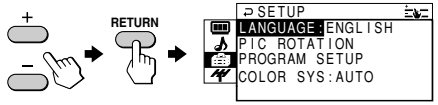
Changing the menu language

You can change the menu language as well as the on-screen language. For details on how to use the menu, see **Introducing the menu system** on page 18.

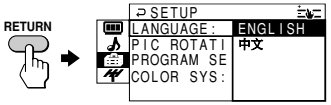
1 Press MENU.



2 Press + or – to select the SETUP icon ( ), then press RETURN.

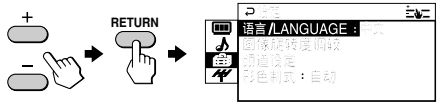


3 Make sure "LANGUAGE" is selected, then press RETURN .



4 Press + or – to select the desired language (e.g.,"中文"), then press RETURN .

The selected menu language appears.



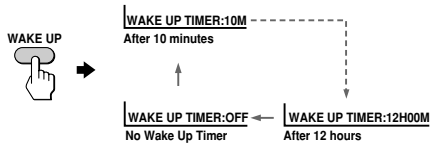
To return to the normal screen

Press MENU.

Setting the Wake Up timer

1 Press WAKE UP until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



2 Select the channel number or video input you want to wake up to.

3 Press POWER, or set the Sleep timer if you want the TV to turn off automatically.

The WAKE UP indicator on the TV lights up orange.

To cancel the Wake Up timer

Press WAKE UP until "WAKE UP TIMER: OFF" appears, or turn off the TV's main power.

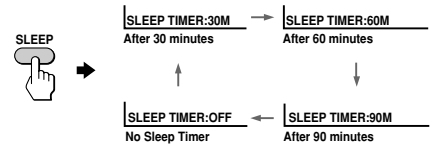
Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode. To resume watching the TV, press any button or control on the TV or the remote.

Setting the Sleep timer

Press SLEEP until the desired period of time appears.

The Sleep timer starts immediately after you have set it.



To cancel the Sleep timer

Press SLEEP until "SLEEP TIMER: OFF" appears, or turn the TV off.

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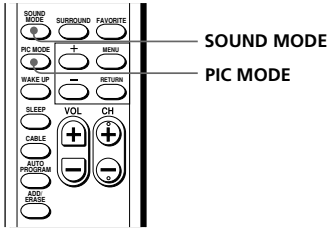
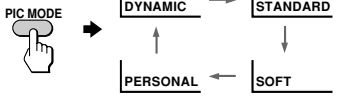
Selecting the picture and sound modes



You can select picture and sound modes and adjust the setting to your preference in the "PERSONAL" option.

Selecting the picture mode

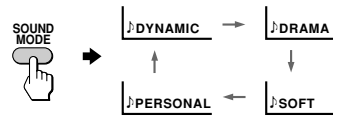
Press PIC MODE repeatedly until the desired picture mode is selected.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal pictures.
"SOFT"	receive mild pictures.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "PICTURE" menu (see page 21).

Selecting the sound mode

Press SOUND MODE repeatedly until the desired sound mode is selected.

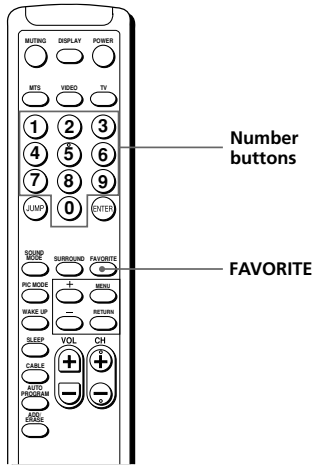


Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes both the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "SOUND" menu (see page 23).

Tip

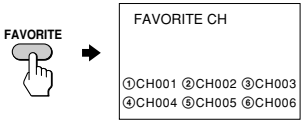
- You can also set the picture and sound modes using the menu (see **Changing the "PICTURE" setting** on page 20 and **Changing the "SOUND" setting** on page 22).

Viewing your favorite channels

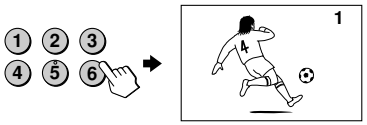


You can display and select six of your favorite channels directly from your TV screen.

1 Press FAVORITE.



2 Press the number button from 1 to 6 to select the desired favorite channel.

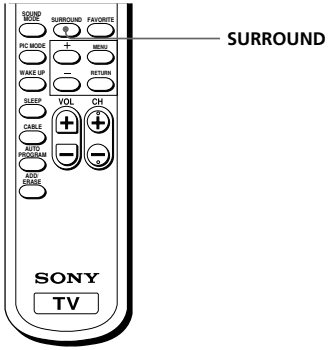


Tip

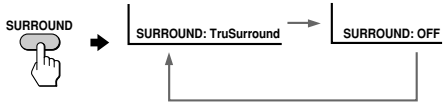
- To program your favorite channels, see **Adjusting each channel number settings (CHANNEL SETUP)** on page 25.

Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press SURROUND repeatedly until you receive the desired surround sound.



Select	To
"TruSurround"	listen to the surround sound that spreads out to the rear of a room.
"OFF"	turn off the surround sound.

Tip

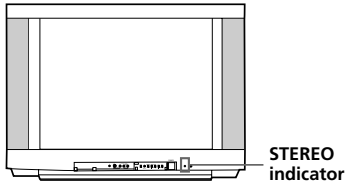
- You can also select the surround option using the menu (see **Changing the "SOUND" setting** on page 22).

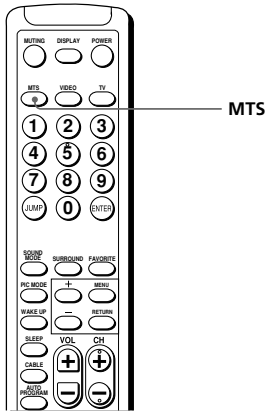
The surround of your TV is categorized as TruSurround.

TruSurround™ is a trademark of SRS Labs, Inc. SRS and the SRS symbol are registered trademarks of SRS Labs, Inc. in the United States and selected foreign countries. SRS and TruSurround are incorporated under license from SRS Labs, Inc. and are protected under United States Patent Nos. 4,748,669 and 4,841,572 with numerous additional issued and pending foreign patents.

Enjoying stereo or bilingual programs

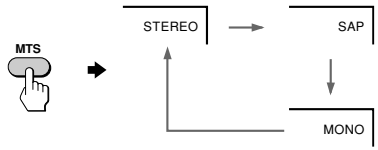
You can enjoy stereo sound or bilingual programs of MTS stereo system.





When receiving a MTS program, press MTS repeatedly until you receive the sound you want.

The STEREO indicator on the TV lights up red when receiving any stereo program.



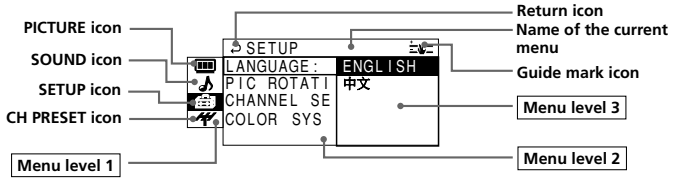
Select	To
"STEREO"	Listen to stereo broadcast sound.
"SAP"	Listen to SAP broadcast sound.
"MONO"	Listen to monaural sound.

Notes

- When select SAP, non-SAP program sound will be same as STEREO mode sound.
- When the signal is very weak, the SAP or STEREO broadcast sound may become abnormal. To improve the sound, select "MONO".

Introducing the menu system

The MENU button lets you open a menu and change the settings of your TV. The following is an overview of the menu system.

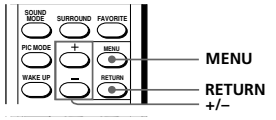


Level 1	Level 2	Level 3/Function
"PICTURE"	"PICTURE MODE"	Select the picture mode: "DYNAMIC"→ "STANDARD"→ "SOFT"→ "PERSONAL"→ "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR"→ "BRIGHT"→ "HUE"→ "SHARP"
	"WIDE MODE"	Change the picture size.
	"INTELLIGENT PIC"	Optimize picture quality.
"SOUND"	"SOUND MODE"	Select the sound mode: "DYNAMIC"→ "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE"→ "BALANCE"→ "BBE"*
	"SURROUND"	Select the surround mode: "TruSurround" → "OFF"
	"INTELLIGENT VOL"	Adjust volume automatically.
"SETUP"	"LANGUAGE"	Change the menu language: "ENGLISH" → "中文"(Chinese)
	"PIC ROTATION"	Adjust the picture position.
	"CHANNEL SETUP"	Adjust each channel number settings.
	"COLOR SYS"	Change the color system (for video input only): "AUTO" → "PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"
"CH PRESET"	"AUTO PROGRAM"	Preset channels automatically.
	"CABLE"	Watch cable TV programs.

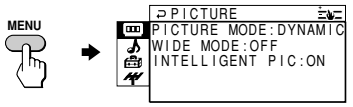
* The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.

How to use the menu

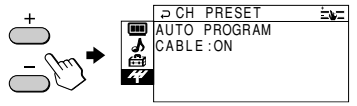
You can use the buttons on the remote and on the TV as well to display the menu and adjust the settings.



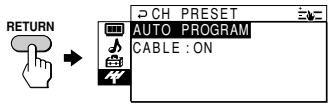
1 Press MENU to display the menu.



2 Press + or – to select the desired item.



3 Press RETURN to confirm your selection and go to the next menu level.



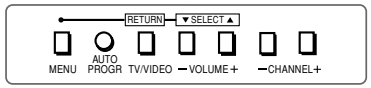
Other menu operations

To	Press
Adjust the setting value	+/–
Return to the previous menu level	RETURN
Cancel the menu	MENU

Tips

- To return from Menu Level 2 to Menu Level 1, press +/– to select the return icon (↩), then press RETURN.
- Some of the menu items can be operated directly using the remote buttons.
- The MENU, RETURN, and SELECT ▼/▲ buttons on the TV can also be used for the operations above.

Front of TV

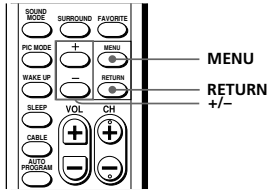


Note

- If more than 60 seconds elapsed between entries, the menu screen automatically disappears.

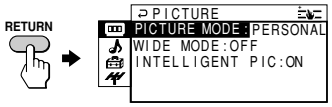
Changing the "PICTURE" setting

The "PICTURE" menu allows you to adjust the picture settings.

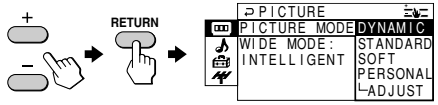


1 Press MENU.

2 Make sure the "PICTURE" icon ( ) is selected, then press RETURN.



3 Press + or – to select the desired item (e.g., "PICTURE MODE"), then press RETURN.



Select	To
"PICTURE MODE"	choose either "DYNAMIC", "STANDARD", "SOFT", "PERSONAL"*, or "ADJUST".
"WIDE MODE"	change the picture size when receiving wide-mode (16:9) picture signal. Press + or – to select "ON", then press RETURN. To cancel, select "OFF", then press RETURN.
"INTELLIGENT PIC"	optimize picture quality. Press + or – to select "ON", then press RETURN. To cancel, select "OFF", then press RETURN.

* When the "PERSONAL" mode is selected, you can receive the last adjusted picture settings from the "ADJUST" option (see page 21).

Note

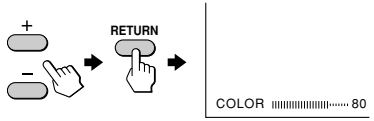
- For details on the options under "PICTURE MODE", see pages 14.

To return to the normal screen

Press MENU.

Adjusting the "ADJUST" items under "PICTURE MODE"

1 Press + or – to select the desired item (e.g.,"COLOR"), then press RETURN.



2 Adjust the value according to the following table, then press RETURN.

For	Press – to	Press + to
"PICTURE"	decrease picture contrast	increase picture contrast
"COLOR"	decrease color intensity	increase color intensity
"BRIGHT"	darken the picture	brighten the picture
"HUE"	increase red picture tones	increase green picture tones
"SHARP"	soften the picture	sharpen the picture

3 Repeat the above steps to adjust other items.

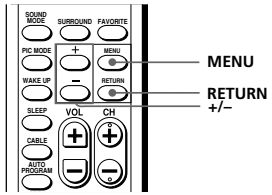
The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 18.

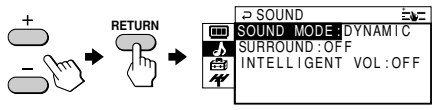
Changing the "SOUND" setting

The "SOUND" menu allows you to adjust the sound settings.

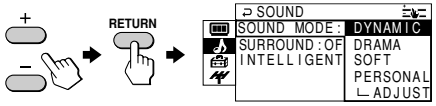


1 Press MENU.

2 Press + or – to select the "SOUND" icon (♪), then press RETURN.



3 Press + or – to select the desired item (e.g., "SOUND MODE"), then press RETURN.



Select	To
"SOUND MODE"	choose either "DYNAMIC", "DRAMA", "SOFT", "PERSONAL"*, or "ADJUST".
"SURROUND"	choose either "TruSurround" or "OFF".
"INTELLIGENT VOL"	adjust the volume of all channel numbers and video inputs automatically. Press + or – to select "ON", then press RETURN. To cancel, select "OFF", then press RETURN.

* When the "PERSONAL" mode is selected, you can receive the last adjusted sound settings from the "ADJUST" option (see page 23).

Note

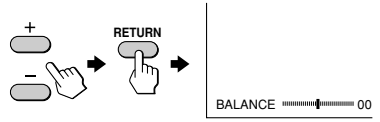
- For details on the options under "SOUND MODE" and "SURROUND", see pages 14 and 16 respectively.

To return to the normal screen

Press MENU.

Adjusting the "ADJUST" items under "SOUND MODE"

1 Press + or – to select the desired item (e.g., "BALANCE"), then press RETURN.



2 Adjust the value according to the following table, then press RETURN.

For	Press – to	Press + to
"BASS"	decrease the bass	increase the bass.
"TREBLE"	decrease the treble	increase the treble.
"BALANCE"	increase the left speaker's volume	increase the right speaker's volume.
"BBE"	select "HIGH" for higher enhancement of sound clarity; select "LOW" for lower enhancement of sound clarity; select "OFF" to turn off the BBE sound.	

3 Repeat the above steps to adjust other items.

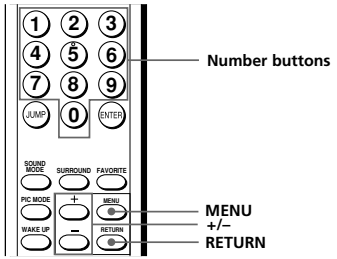
The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 18.

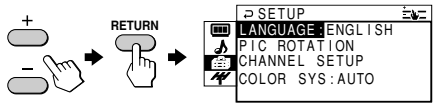
Changing the "SETUP" setting

The "SETUP" menu allows you to change the menu language, adjust the picture position, adjust the channel number settings and select the color system.

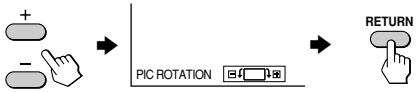


1 Press MENU.

2 Press + or – to select the "SETUP" icon (), then press RETURN.



3 Press + or – to select the desired item (e.g., "LANGUAGE"), then press RETURN.

Select	To
"LANGUAGE"	change the menu language (see **Changing the menu language** on page 12).
"PIC ROTATION"	adjust the picture position when it is not aligned with the TV screen. Press + or – to adjust the picture position, then press RETURN. 
"CHANNEL SETUP"	adjust each channel number settings (see **Adjusting each channel number settings (CHANNEL SETUP)** on page 25).
"COLOR SYS"	change the color system (for video input only). Press + or – to select the appropriate color system, then press RETURN. Normally, set this to "AUTO".

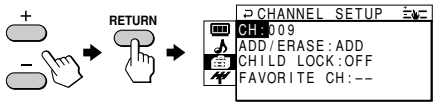
To return to the normal screen

Press MENU.

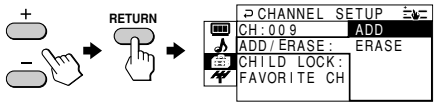
Adjusting each channel number settings (CHANNEL SETUP)

1 Select "CHANNEL SETUP" from the "SETUP" menu.

2 Select "CH" and press RETURN. Press + or – to select the desired channel number you want to adjust, then press RETURN.



3 Press + or – to select the desired item (e.g., "ADD/ERASE"), then press RETURN.



Select	To
"CH"	select the desired channel number.
"ADD/ERASE"	preset the selected channel manually. Press + or – to select "ADD", then press RETURN. To disable an unused or unwanted channel, select "ERASE", then press RETURN. You can also preset channels manually using the ADD/ERASE button on the remote, refer page 10.
"CHILD LOCK"	prevent children from watching this selected channel number. Press + or – to select "ON", then press RETURN. The lock symbol ( ) appears on the screen. To cancel, select "OFF", then press RETURN. If you automatically preset a locked channel number, that channel number will be unlocked.
"FAVORITE CH"	program six favorite channels for direct selection. Press + or – to select one of the six favorite channel numbers (if you decide not to make any changes, select "↩"), then press RETURN. To view the selected favorite channel, refer page 15.

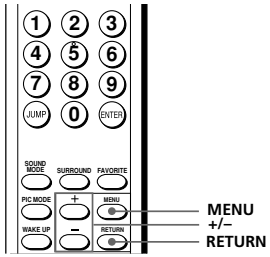
4 To continue adjusting other channel numbers, press + or – to select "CH", then repeat steps 2 and 3.

To return to the normal screen

Press MENU.

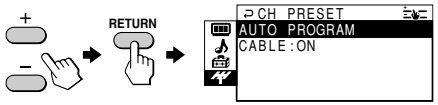
Changing the Channel Preset ("CH PRESET") setting

The "CH PRESET" menu allows you to adjust the setup of your TV to receive either CABLE TV or VHF and UHF broadcast.

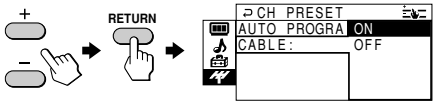


1 Press MENU.

2 Press + or – to select the "CH PRESET" icon (), then press RETURN.



3 Press + or – to select the desired item (e.g., "CABLE"), then press RETURN.



Select	To
"AUTO PROGRAM"	preset channels automatically. If you automatically preset a locked channel number ("CHILD LOCK"), that channel number will be unlocked (see page 25).
"CABLE"	receive cable TV programs. Press + or – to select "ON", then press RETURN. If there is no cable TV program, you will receive the VHF or UHF broadcast channel. To receive only VHF and UHF broadcast channels, select "OFF", then press RETURN.

To return to the normal screen

Press MENU.

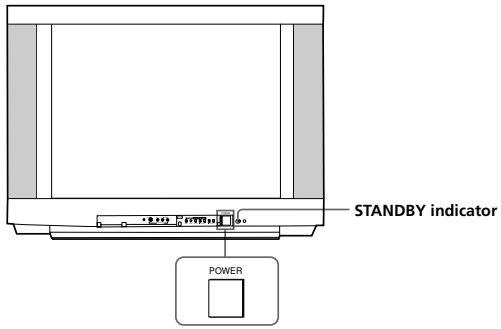
Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 18.

Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the STANDBY indicator flashes red. The number of times the STANDBY indicator flashes indicates the possible causes.

Front of TV



1 Check that the STANDBY indicator flashes red a number of times between three second intervals.

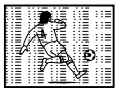
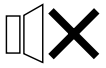
2 Count the number of times the STANDBY indicator flashes.

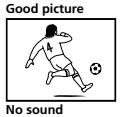
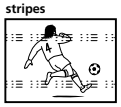
3 Press POWER to turn off your TV.

4 Inform your nearest Sony service center about the number of times the STANDBY indicator flashed.
Be sure to note the model name and serial number located on the rear of your TV.

Troubleshooting

If you find any problem while viewing your TV, please check the following guide. If any problem persists, contact your Sony dealer .

Symptom	Possible cause	Solutions	Page
Snowy picture 	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• Channel presetting is inappropriate or incomplete.	• Preset the channel again.	10
Noisy sound	• The antenna type is inappropriate.	• Check the antenna type (“VHF”/“UHF”). Contact a Sony dealer for advice.	–
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture	• Broadcast signals are too strong.	• Turn off or disconnect the booster if it is in use.	–
Noisy sound			
No picture	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	4
	• The TV is not turned on.	• Press POWER. • Press POWER on the TV to turn off the TV for about five seconds, then turn it on again.	11 11
No sound 			

Symptom	Possible cause	Solutions	Page
Good picture  **No sound**	• The volume level is too low.	• Press VOL + to increase the volume level.	12
	• The sound is muted.	• Press MUTING to cancel the muting.	12
	• Broadcast signal has a transmission problem.	• Press MTS until a better sound is heard.	17
Dotted lines or stripes 	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or “ghosts”	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna.	–
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color	• The color level setting is too low.	• Display the “PICTURE” menu and select “ADJUST” of “PICTURE MODE”, then adjust the “COLOR” level.	21
	• The color system setting is inappropriate (for video input only).	• Display the “SETUP” menu and check the color system (“COLOR SYS”) setting (usually set this to “AUTO”).	24
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
Abnormal color patches	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth’s magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. Do not move the TV while the TV is turned on. Press POWER on the TV to turn off the TV for about five minutes, then turn it on again.	–
TV cannot receive stereo broadcast signal.	• The stereo reception setting is inappropriate.	• Press MTS until “STEREO” appears on the screen.	17

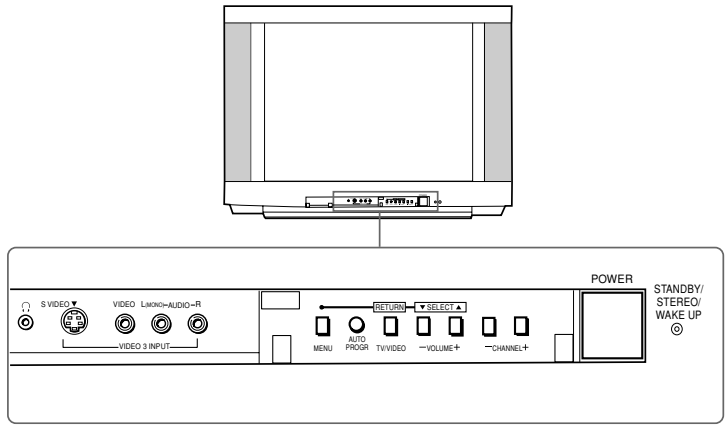
continued

Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Stereo broadcast sound switches on and off or is distorted. **or** **The sound switches between monaural and stereo frequently.**	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Broadcast signal has a transmission problem.	• Press MTS until a better sound is heard.	17
Picture slant 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. • Display the "SETUP" menu and adjust "PIC ROTATION" until the picture is optimal.	– 24
The ⏻ indicator on your TV flashes red a number of times between 3-second intervals.	• Your TV may need service.	• Contact your nearest Sony service center.	27
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.	—	–
A "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.	—	–

Overview of controls

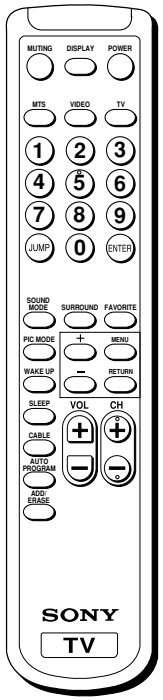
TV front panel



Button	Function	Page
AUTO PROGR	Preset channels automatically.	5
POWER	Turn off completely or turn on the TV.	11
CHANNEL +/–	Select channel number.	11
STANDBY	Standby indicator	11
VOLUME +/–	Adjust volume.	12
TV/VIDEO	Select TV or video input.	12
WAKE UP	Wake Up indicator	13
STEREO	Stereo/bilingual indicator.	17
Menu operation		
MENU	Display the menu.	19
SELECT ▼/▲	Select and adjust items.	19
RETURN	Confirm selected items.	19
🎧	Headphone jack.	–

continued

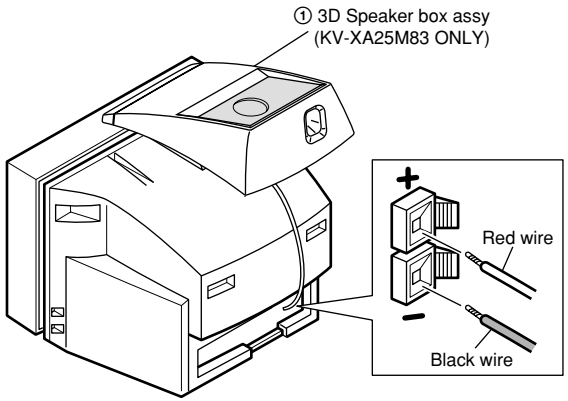
Remote control



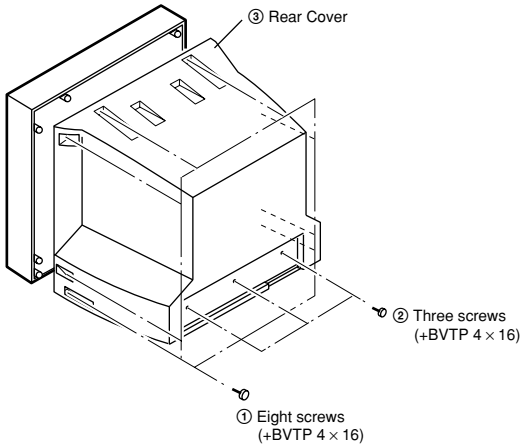
Button	Function	Page
AUTO PROGRAM	Preset channels automatically.	5
CABLE	Receive cable TV programs.	5
ADD/ERASE	Preset channels manually.	10
0 – 9	Input numbers.	10
ENTER	Confirm input number.	10
POWER	Turn off temporarily or turn on the TV.	11
CH +/–	Select channel number.	11
VOL +/–	Adjust volume.	12
VIDEO	Select TV or video input.	12
TV	Display the TV program.	12
MUTING	Mute the sound.	12
DISPLAY	Display on-screen information.	12
JUMP	Jump to previous channel number.	12
Timer operation		
WAKE UP	Set TV to turn on automatically.	13
SLEEP	Set TV to turn off automatically.	13
PIC MODE	Select picture mode.	14
SOUND MODE	Select sound mode.	14
Favorite Channel operations		
FAVORITE	Display favorite channels.	15
1 – 6	Select desired channel.	15
SURROUND	Select surround mode.	16
Stereo/bilingual operations		
MTS	Select stereo/bilingual mode.	17
Menu operations		
MENU	Display the menu.	19
+, –	Select and adjust items.	19
RETURN	Confirm selected items.	19

SECTION 2
DISASSEMBLY

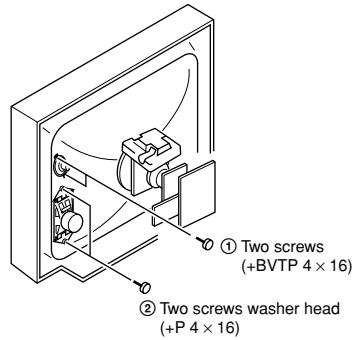
2-1. 3D SPEAKER BOX REMOVAL



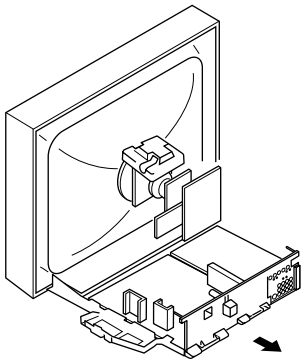
2-2. REAR COVER REMOVAL



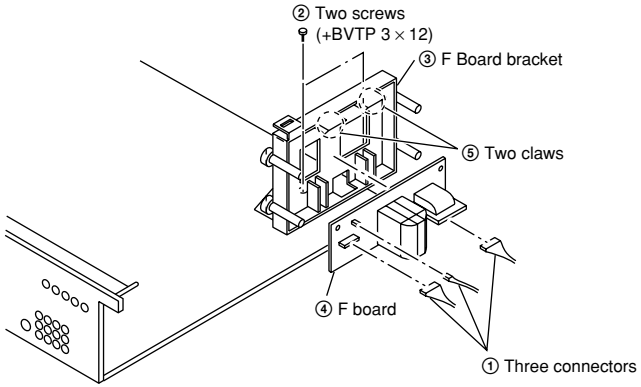
2-3. SPEAKER REMOVAL



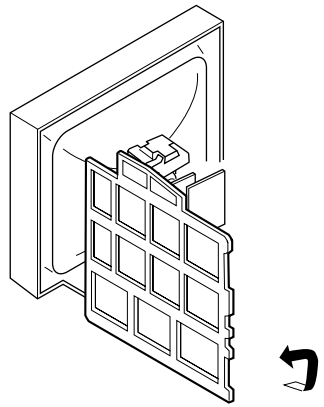
2-4. CHASSIS ASSY REMOVAL



2-5. F BRACKET REMOVAL



2-6. SERVICE POSITION

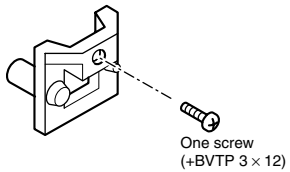


Note:
1. Disconnect the speaker connection on the right side.
2. Undress necessary wires that creates tension while placing the chassis into Service Position.

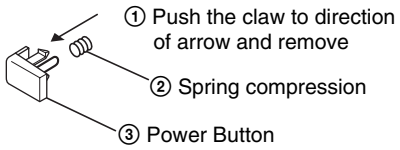
2-7. REPLACEMENT OF PARTS

For replacement of light guide,unscrew them, exchange with new parts and fix them with screws respectively.

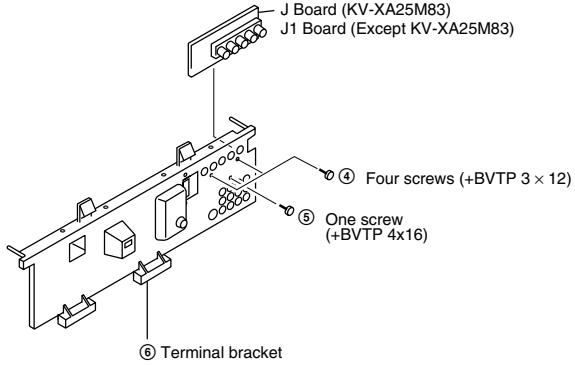
2-7-1. Replacement of Light Guide



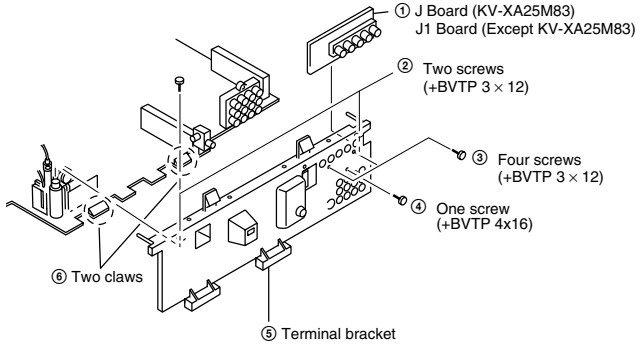
2-7-2. Replacement of Power Button



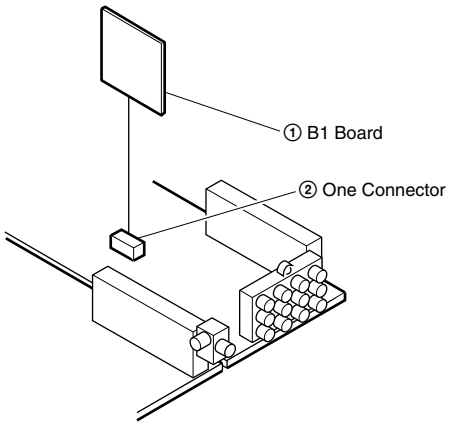
2-8. HV CAP BLOCK, PWB HOLDER, J AND J1 BOARDS REMOVAL



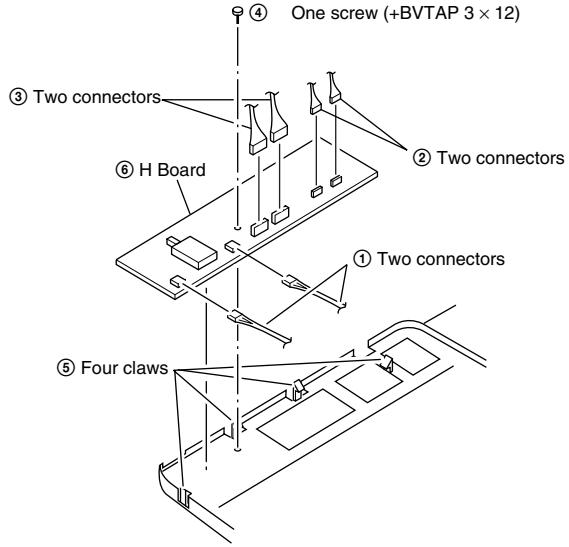
2-9. TERMINAL BRACKET REMOVAL



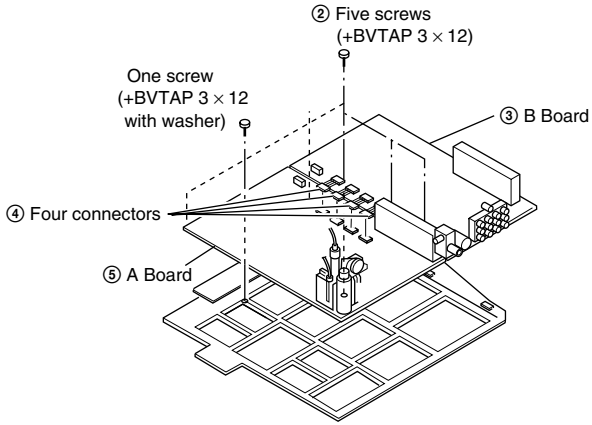
2-10. B1 BOARD REMOVAL



2-11. H BOARD REMOVAL

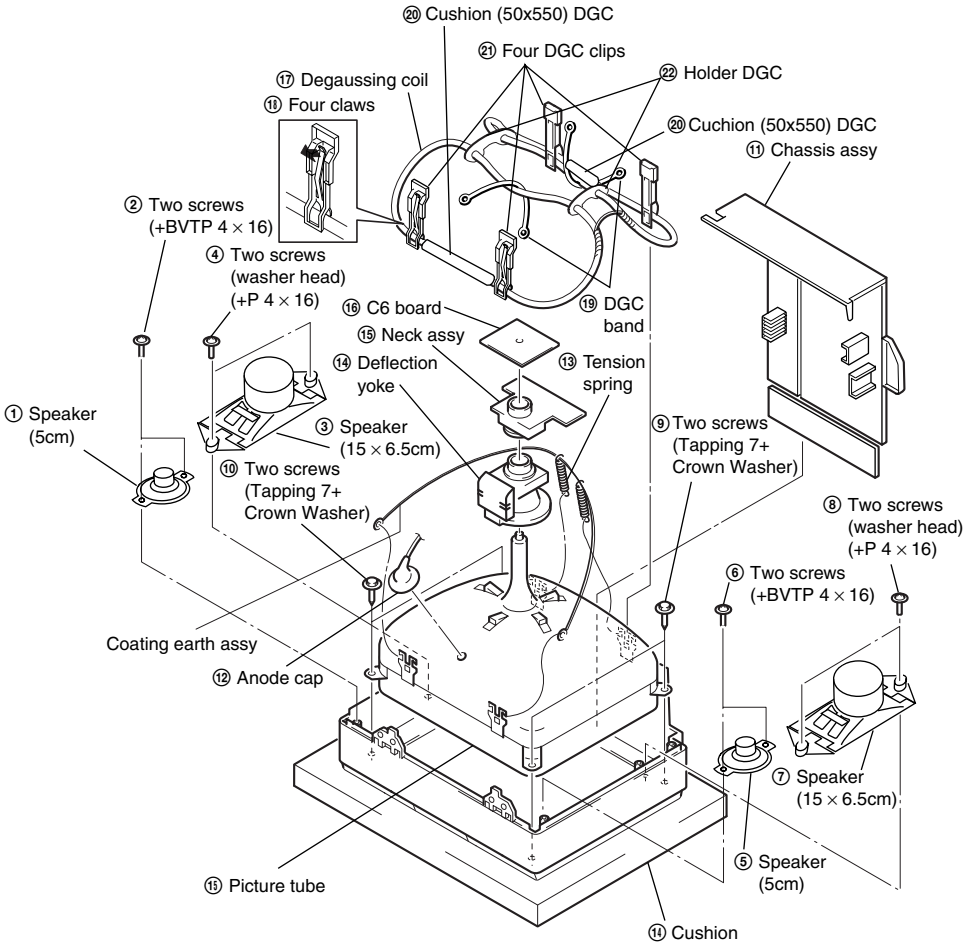


2-12. A AND B BOARDS REMOVAL



2-13. PICTURE TUBE REMOVAL

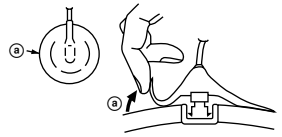
Note:
- Please remove necessary CRT support located on top left, top right, prior to removing


⑳ Cushion (50x550) DGC
㉑ Four DGC clips
㉒ Holder DGC
⑰ Degaussing coil
⑱ Four claws
⑳ Cuchion (50x550) DGC
⑪ Chassis assy
② Two screws (+BVTP 4 × 16)
④ Two screws (washer head) (+P 4 × 16)
⑯ C6 board
⑲ DGC band
⑮ Neck assy
⑭ Deflection yoke
⑬ Tension spring
① Speaker (5cm)
③ Speaker (15 × 6.5cm)
⑨ Two screws (Tapping 7+ Crown Washer)
⑩ Two screws (Tapping 7+ Crown Washer)
⑧ Two screws (washer head) (+P 4 × 16)
⑥ Two screws (+BVTP 4 × 16)
Coating earth assy
⑫ Anode cap
⑦ Speaker (15 × 6.5cm)
⑤ Speaker (5cm)
⑮ Picture tube
⑭ Cushion

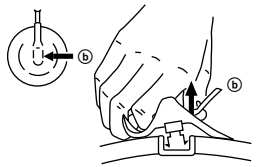
• REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

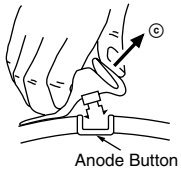
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



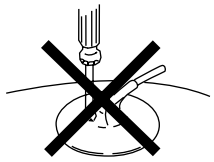
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

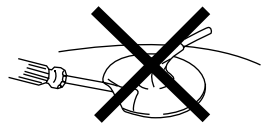


③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.

• HOW TO HANDLE AN ANODE-CAP

① Do not damage the surface of anode-caps with sharp shaped objects.
② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.
③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.





SECTION 3
ADVANCE OPERATION

3-1. "RESET" FUNCTION

1. Purpose

If a customer faces some setting problem that cannot be solved, using the "RESET" function some items will be reset to its original setting (shipment condition)

2. How to Operate

The way to access to the "RESET" Function:-

a) By pressing "MENU" button or "SELECT" button (for non-menu models) on the Front Key Input and hold it down for 5 seconds.

3. Subsequent of Operation

Sequential to the resetting operation (either methods being used in No. 2), TV set would shut down once and automatically turn on again. The power-off duration is expected to be about 500msec. An OSD message, "RESET" tentatively will be displayed for 10 sec after IK status gets stable.
As a result, some items will be reset to an initial condition (shipment condition) wheareas some other remains at the last selection by user.

Items that remains at the last selection by user

Program No., Favourite CH Setup, PIC rotation, OSD Language, Fine tuning, TV System, Skip

Reset Items

Video input	RF	Color system(RF)	AUTO*
Volume	30	Antenna sensitivity	HIGH*
Picture mode	DYNAMIC	Stereo mode	STEREO/NICAM* STEREO/SAP (KV-XA25N90)
Sound mode	DYNAMIC	Bilingual mode	MAIN*
Surround mode	OFF	High-deviation mode	AUTO*
Color system(video)	AUTO	Child lock	OFF*
Multi picture(PIP) *1	OFF	Wide mode	OFF
PIP position *1	Bottom-right	Game mode *1	OFF
Favourite CH mode	AUTO	Teletext mode *1	OFF
OSD recall	OFF	Sleep timer	OFF
Intelligent volume	OFF	Wake-up timer	OFF
ECO mode *1	OFF	Sound muting	OFF

* = only when in RF mode
*1= Not used for these models

SECTION 4
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal
BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

4-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast } normal
   Brightness }
2. Position neck assy as shown in Fig4-1.
3. Set the pattern generator raster signal to a green raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 4-2 through 4-4.)
5. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 4-2.)
6. Switch the raster signal to blue, then to red and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Figure 4-5.)

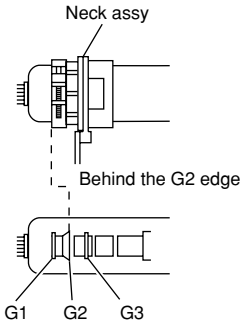


Fig. 4-1

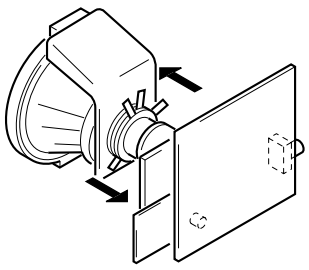


Fig. 4-2

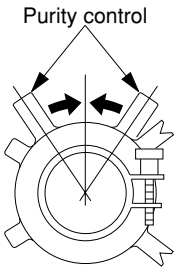


Fig. 4-3

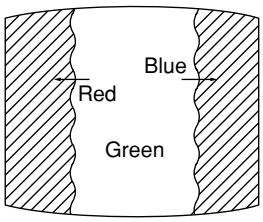


Fig. 4-4

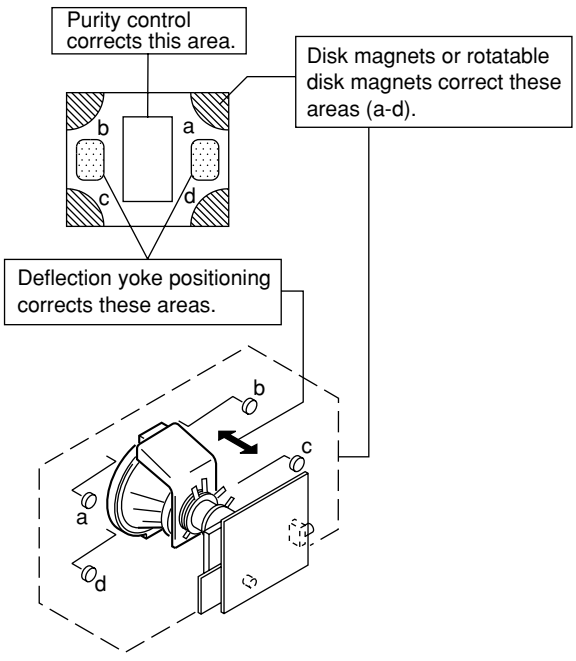


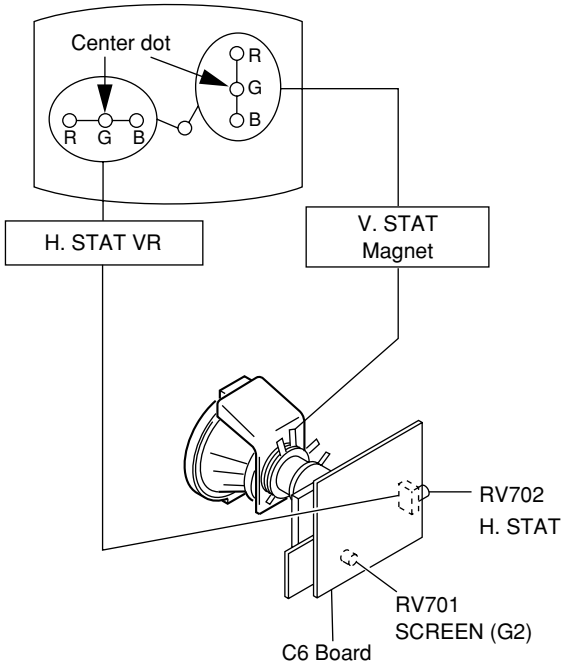
Fig. 4-5

4-2. CONVERGENCE

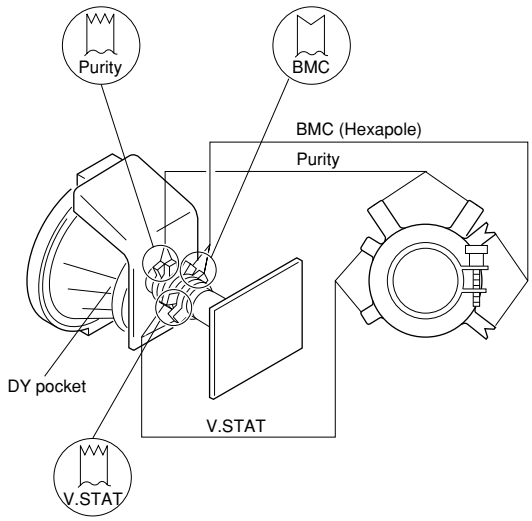
Preparation :

- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Receive dot/hatch signal.
- Pic mode: Personal (Pic 90%, Brightness 50%, Col 50 %, Hue 50%, Shp 50%).

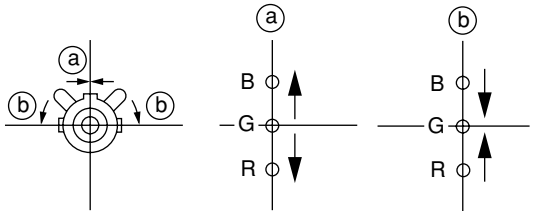
(1) Horizontal and Vertical Static Convergence



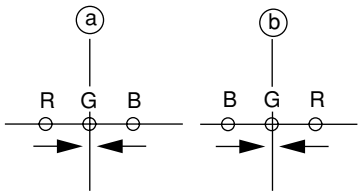
1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)



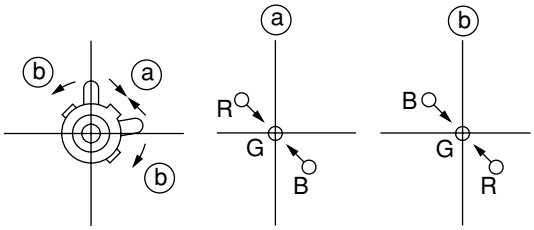
① V. STAT



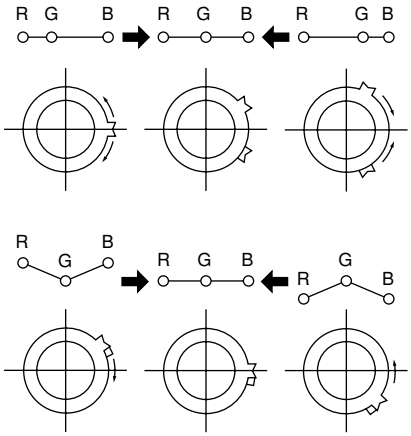
② H. STAT VR



③



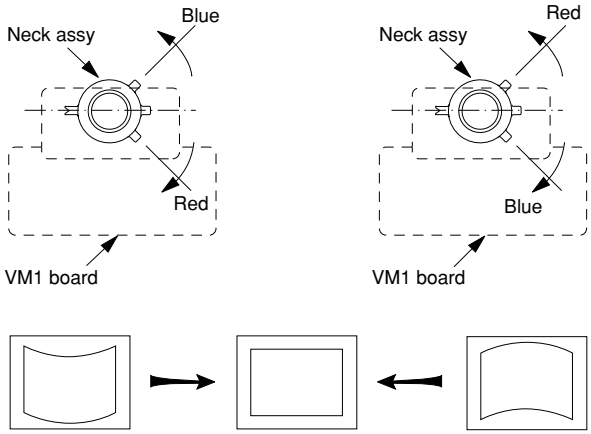
④ BMC (Hexapole) Magnet.
If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



⑤ Y separation axis correction magnet adjustment.

1. Receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .

2. Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.



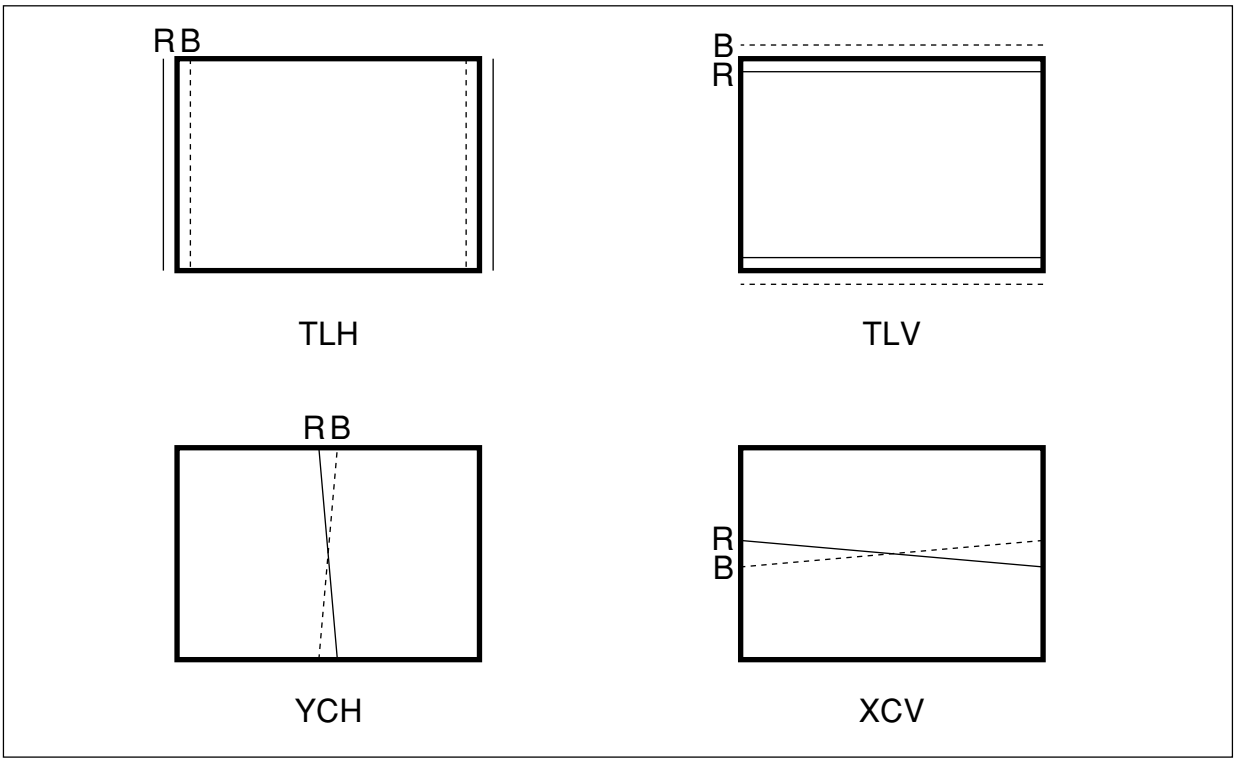
(2) Dynamic Convergence Adjustment

Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence

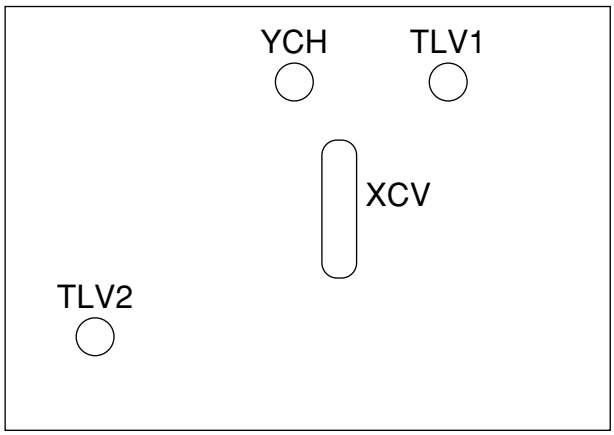
Note

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

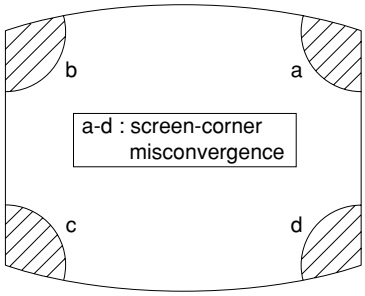


TLV	Rotate	TLV-2	VOL (29", 34") on DY
	Rotate	TLV	VOL (25") on DY
XCV	Rotate	XCV	Adj core on DY
YCH	Rotate	YCH	VOL on DY
TLH	Insert	TLH	Correction Plate to DY Pocket (Left or Right)

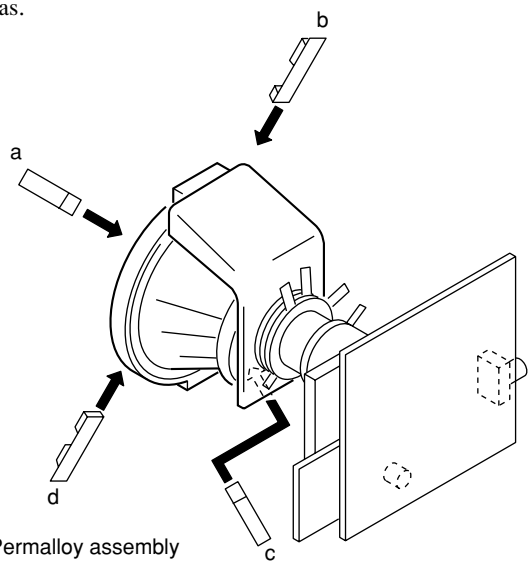
ON DY:



(3) Screen-corner Convergence



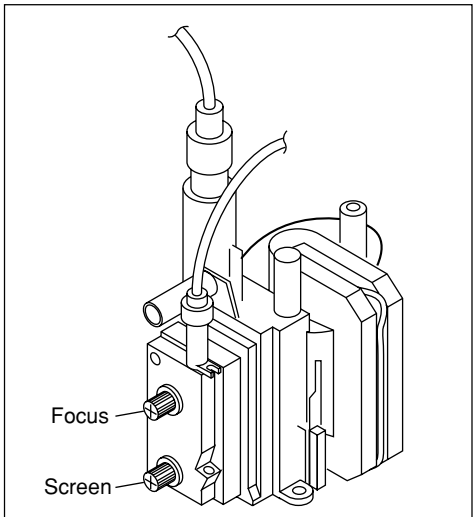
Fix a Permalloy assy corresponding to the misconverged areas.



4-3. FOCUS ADJUSTMENT

FOCUS adjustment should be completed before W/B adjustment.

1. Receive digital monoscope pattern.
2. Set "Picture Mode" to "DYNAMIC".
3. (a) Adjust figure VR so that the center of screen becomes just focus (except 25").
   (b) Adjust focus VR so that the lion teeth becomes just focus (25" only).
4. Change the receiving signal to white pattern and blue back.
5. Confirm magenta ring is not noticable. Incase magenta ring is obvious, adjust FOCUS VR to balance between MAGENTA RING and FOCUS.

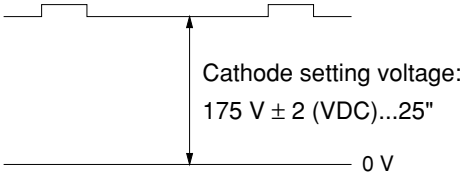


FLYBACK TRANSFORMER (T503)

4-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENT

1. G2 (SCREEN) ADJUSTMENT

1) Set the PICTURE to normal.
2) Put to VIDEO input mode without signals.
3) Connect R, G and B of the C6 board cathode to the oscilloscope.
4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
5) Adjust G2 (screen) on the FBT until picture shows the point before cut off.

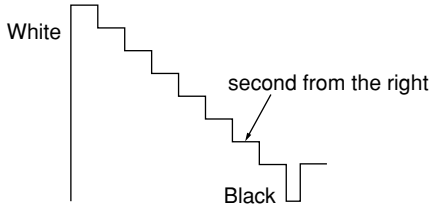


2. WHITE BALANCE ADJUSTMENT

1) Set to Service Mode (Refer Section 5-1: ADJUSTMENTS WITH COMMANDER).
2) Input white raster signal.
3) Set the PICTURE to minimum.
4) Select GCT (WHB 4) and BCT (WHB 5) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
5) Set the PICTURE to maximum.
6) Select GDR (WHB 1) and BDR (WHB 2) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
7) Write into the memory by pressing [MUTING] then [0].

3. SUB BRIGHT ADJUSTMENT

1) Set to service mode.
2) Input a staircase signal of black to white from the pattern generator.
3) BRIGHTNESS 50%.
   PICTURE MINIMUM
4) Select SBR (WHB7) with [1] and [4], and adjust SBR (WHB7) level with [3] and [6] so that the second stripe from the right is dimly lit.



SECTION 5
CIRCUIT ADJUSTMENTS

5-1. ADJUSTMENT WITH COMMANDER

Service adjustments to this model can be performed using the supplied Remote Commander RM-914 and RM-954

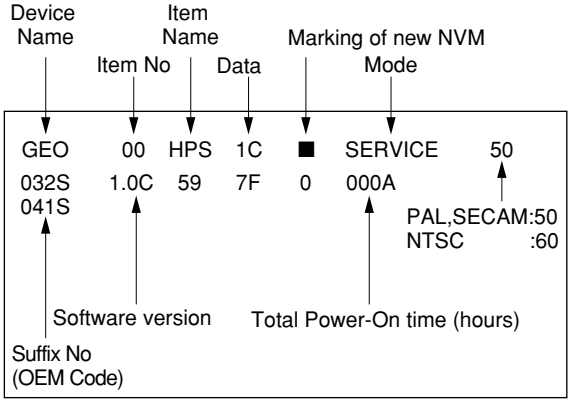
a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

This operation sequence puts the unit into service mode.

The screen display is :



b. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), to select the adjustment.
4) Press [MUTING] button to indicate WRITE on the screen.
5) Press [0] button to write into memory.

d. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.

[1], [4]	Select the adjustment item.
↓	
[3], [6]	Raise/lower the data value.
↓	
[MUTING]	Writes.
↓	
[0]	Executes the writing.

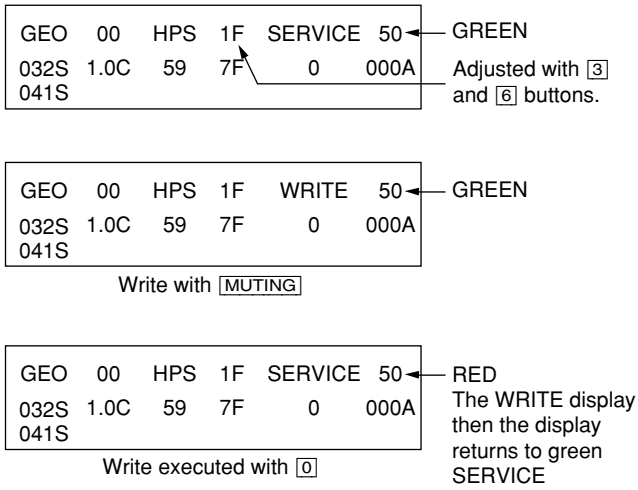
[7], [0]	All the data becomes the values in memory.
[8], [0]	All user control goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[MUTING] + [0]	Write 50Hz adjustment data to 60Hz, or vice versa.
[2], [0]	Write 50Hz adjustment data to 60Hz, or vice versa.

5-2. ADJUSTMENT METHOD

Item Number 00 of device GEO
This explanation uses H-Position as an example.

1. Select "GEO 00 HPS" with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the [0] button. (The WRITE display will be changed to red color while excuting, and back to SERVICE.)

Example on screen display :-


GEO 00 HPS 1F SERVICE 50
032S 1.0C 59 7F 0 000A
041S
GREEN
Adjusted with 3 and 6 buttons.
GEO 00 HPS 1F WRITE 50
032S 1.0C 59 7F 0 000A
041S
GREEN
Write with MUTING
GEO 00 HPS 1F SERVICE 50
032S 1.0C 59 7F 0 000A
041S
Write executed with 0
RED
The WRITE display then the display returns to green SERVICE

Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

Note : 1. In [WRITE], the data for all items are written into memory together.
2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table

TVG	Functionality		Range	Function	Table & Note	Register No. (Bit Range)	Device Name (Slave Address)	NVM Adddress			Remarks:
Category	No.	Name						Slave	Sub	Bit	Initial data for tables
GEO	00	HPS	3F	H Position	Normal(50/60)/Wide(50/60)	14 (7-2)	CXA2159S(88H)	A0/A4	(A1/AE)/(44/4F)	7-2	1E(for 50Hz) / 16(for 60Hz)
	01	HSZ	3F	H Size	Normal(50/60)/Wide(50/60)	13 (7-2)		A0/A4	(A0/AD)/(43/4E)	7-2	1F
	02	PAP	3F	Pin Amp	Normal(50/60)/Wide(50/60)	15 (7-2)		A0/A4	(A2/AF)/(45/50)	7-2	1F
	03	TLT	0F	Trapezium	Normal(50/60)/Wide(50/60)	17 (7-4)		A0/A4	(A4/B1)/(47/52)	7-4	7
	04	VPS	3F	V Position	Normal(50/60)/Wide(50/60)	11 (7-2)		A0/A4	(9E/AB)/(41/4C)	7-2	1F
	05	VSZ	3F	V size	Normal(50/60)/Wide(50/60)	10 (7-2)		A0/A4	(9D/AA)/(40/4B)	7-2	1F
	06	SCO	0F	S Correction	Normal(50/60)/Wide(50/60)	12 (7-2)		A0/A4	(9F/AC)/(42/4D)	7-4	7
	07	VLN	0F	V Linearity	Normal(50/60)/Wide(50/60)	12 (3-0)		A0/A4	(9F/AC)/(42/4D)	3-0	7
	08	BOW	0F	AFC Bow	Normal(50/60)/Wide(50/60)	18 (7-4)		A0/A4	(A5/B2)/(48/53)	7-4	7
	09	AGL	0F	AFC Angle	Normal(50/60)/Wide(50/60)	18 (3-0)		A0/A4	(A5/B2)/(48/53)	3-0	7
	0A	UPN	3F	Upper Pin	Normal(50/60)/Wide(50/60)	16 (7-2)		A0/A4	(A3/B0)/(46/51)	7-2	1F
	0B	LPN	3F	Lower Pin	Normal(50/60)/Wide(50/60)	1A (7-2)		A0/A4	(A7/B4)/(4A/55)	7-2	1F
	0C	HBL	1	H Blanking on/off		1A (1)		A0	9A	1	1
	0D	LBL	0F	Left H Blanking	Normal(50/60)/Wide(50/60)	19 (7-4)		A0/A4	(A6/B3)/(49/54)	7-4	0B(for 50Hz) / 0F(for 60Hz)
	0E	RBL	0F	Right H Blanking	Normal(50/60)/Wide(50/60)	19 (3-0)		A0/A4	(A6/B3)/(49/54)	3-0	2
WHB	00	RDR	3F	R Drive	DYNAMIC/others	0B (7-2)	CXA2159S(88H)	A0	C0/BA	7-2	25(DYNAMIC) / 2A(for OTHER)
	01	GDR	3F	G Drive	DYNAMIC/others	0C (7-2)		A0	C1/BB	7-2	1F
	02	BDR	3F	B Drive	DYNAMIC/others	0D (7-2)		A0	C2/BC	7-2	1F
	03	RCT	0F	R Cutoff	SECAM/others	09 (3-0)		A0	C3/BD	3-0	7
	04	GCT	0F	G Cutoff	SECAM/others	0A (7-4)		A0	C4/BE	7-4	7
	05	BCT	0F	B Cutoff	SECAM/others	0A (3-0)		A0	C4/BE	3-0	7
	06	BMN	1F	Brightness Minimum Data		08 (7-2)		A0	22	6-2	15
	07	SBR	3F	Sub Brightness Control		08 (7-2)		A0	23	7-2	1F
	08	APB	3	Sub Bright Control Switch for Intelligent Picture #3		08 (7-2)		A0	23	1-0	3
SAJ	00	PMX	3F	Picture Maximum Data	non-Wide/Wide	05 (7-2)	CXA2159S(88H)	A0	21/20	7-2	38(N0N-WIDE) / 33(WIDW)
	01	SHU	0F	Sub Hue Control	TV/Video	07 (7-2)		A0	24/38	5-2	8
	02	SSH	0F	Sub Sharpness Control	TV/Video	09 (7-4)		A0	25/36	7-4	04(for TV) / 09(for VIDEO)
	03	SCL	3F	Sub Color Control	(NTSC/others)/WIDE (NTSC/others)	06 (7-2)		A0	(37/26)/(3C/3B)	7-2	1F
VP	00	EHT	0F	EHT Comp	50/60Hz	17 (3-0)	CXA2159S(88H)	A0[/A4]	A4/B1[/(47/52)]	3-0	5
	01	GMA	3	Gamma Correction (sepatated in STANDARD mode)	NON-STD.(NTSC/others) /STD.(NTSC/others)	0D (1-0)		A4	68/67/6A/69	1-0	02(NON-STANDARD) / 01(STANDARD
	02	APG	1	Gamma Control Switch for Intelligent Picture #3	NON-STD.(NTSC/others) /STD.(NTSC/others)	0D (1-0)		A4	68/67/6A/69	2	0
	03	YDL	0F	Y Delay	PAL/SECAM/NTSC/DVD	0E (3-0)		A4	3C/3E/3D/3F	3-0	(06/09/08/08 for PAL/SECAM/NTSC/DVD)
	04	SST	3	SECAM ID Start Position	SECAM&AUTO/ FORCED-PAL&NTSC	03 (5-4)		A4	6B/6D	5-4	01(for SECAM/AUTO) / 01(for forced PAL/NTSC)
	05	SSP	3	SECAM ID Stop Position	SECAM&AUTO/ FORCED-PAL&NTSC	03 (7-6)		A4	6B/6D	7-6	01(for SECAM/AUTO) / 01(for forced PAL/NTSC)
	06	RLM	3	RGB Limit		03 (1-0)		A0	83	1-0	0
	07	SLV	03	SECAM ID Level	SECAM&AUTO/FORCED--PAL&NTSC	04 (1-0)		A4	6C/6E	1-0	02(for SECAM/AUTO) / 02(for forced PAL/NTSC)
	08	SBF	3F	SECAM BELL f0	SECAM&AUTO/FORCED--PAL&NTSC	04 (7-2)		A4	6C/6E	7-2	02(for SECAM/AUTO) / 02(for forced PAL/NTSC)

Adjustment Item Table

TVG	Functionality		Range	Function	Table & Note	Register No. (Bit Range)	Device Name (Slave Address)	NVM Adddress			Remarks:
Category	No.	Name						Slave	Sub	Bit	Initial data for tables
VP	09	DYC	1	Dynamic Color on/off		0C (1)	CXA2159S(88H)	A0	8C	1	1
	0A	ABL	1	ABL Mode Switching (except STANDARD mode)	except STANDARD	0B (1)		A0	8B	1	00 for(STANDARD)/ 01(OTHER)
	0B	VTH	1	ABL Detection Vth Switching		0B (1)		A0	8B	0	1
	0C	SFO	1	FO Switching for Sharpness	NTSC/others	07 (1)		A4	5C/59	1	1
	0D	DCX	1	DC Trans. Ratio Switching		08 (1)		A0	88	1	1
	0E	SHT	1	Pre-/Overshoot ratio Switch	NTSC/others	08 (0)		A4	5D/5A	0	1
	0F	HDW	1	H Drive Pulse Width Switch		00 (6)		A0	80	6	0
	10	AFC	03	AFC Gain Control	TV/Video/Text	11 (1-0)		A0	28/29/2A	1-0	01/00/01 for (TV/VIDEO/TEXT)
	11	HOS	0F	H Oscillation		0E (7-4)		A0	8E	7-4	7
	12	HSS	1	Slice Level of H Sync Sep.		0F (1)		A0	8F	1	0
	13	VSS	1	Slice Level of V Sync Sep.		0F (0)		A0	8F	0	0
	14	HMS	1	Macro Vision C/m off/on	50/60Hz	10 (0)		A0[/A4]	9D/AA[/(40/4B)]	0	1
	15	YUV	1	Y SEL		00 (2)		A0	80	2	0
	16	CDV	3	CD mode for Video and RF under no signal	video only	0F (5-4)		A0	2B	5-4	1
	17	RON	1	R ON	not memorized	01 (2)		A0	81	2	1
	18	GON	1	G ON	not memorized	01 (1)		A0	81	1	1
	19	BON	1	B ON	not memorized	01 (0)		A0	81	0	1
	1A	PON	1	P ON	not memorized	00 (7)		A0	80	7	1
	1B	AXN	1	AXIS SW	NTSC/others (only for DYNAMIC)	07 (0)		A0	37/26[/(3C/3B)]	0	1
	1C	RSL	1	RGB SEL		0C (0)		A0	8C	0	0
	1D	VBW	3	VBLKW		16 (1-0)		A0	96	1-0	0
	1E	RFP	1	REFP		14 (0)		A0	94	0	0
	1F	VMC	3	VM Level		03 (3-2)		A0	83	3-2	0
AP	00	AGC	1	AGC On/Off Control		05 (7)	BH3868AFS(80H)	A6	05	7	0
0	01	SON	1	Surround On/Off		05 (6)		A6	05	6	0
0	02	SST	1	Surround Stereo		05 (5)		A6	05	5	0
0	03	SMO	1	Surround Monoral		05 (4)		A6	05	4	0
0	04	LOP	1	Surround Effect Enhancer		05 (3)		A6	05	3	0
0	05	SUR	7	Surround Effect		05 (2-0)		A6	05	2-0	0
0	06	BAS	1F	Bass Sound Mode Control	dyna/drama/soft	03 (6-0)		A6	06/09/0C	4-0	12/10/10 (for DYNAMIC/DRAMA/SOFT)
	07	TRE	1F	Treble Sound Mode Control	dyna/drama/soft	04 (6-0)		A6	07/0A/0D	4-0	13/13/10 (for DYNAMIC/DRAMA/SOFT)
	08	TRF	3	Treble data offset		04 (6-0)		A6	11	1-0	2
	09	BBE	FF	BBE Sound Mode Control	dyna/drama/soft	02 (7-0)		A6	08/0B/0E	7-0	99/D5/00 (for DYNAMIC/DRAMA/SOFT)
MSP	00	WST	FF	W/G Stereo Threshold			MSP3415D(84H)	A0	60	7-0	15
	01	WBT	FF	W/G Bilingual Threshold				A0	61	7-0	EC
	02	WLL	FF	W/G Monaural Threshold				A0	62	7-0	5
	03	WAC	0F	W/G Agreement Count				A0	63	3-0	1

Adjustment Item Table

TVG	Functionality		Range	Function	Table & Note	Register No. (Bit Range)	Device Name (Slave Address)	NVM Adddress			Remarks:
Category	No.	Name						Slave	Sub	Bit	Initial data for tables
MSP	04	WDL	FF	W/G Search Delay			MSP3415D(84H)	A0	64	7-0	30
	05	NDL	FF	NICAM Search Delay				A0	65	7-0	20
	06	SDL	FF	Stereo Status Read Delay				A0	66	7-0	10
	07	AGC	1	AGC Switch Auto/Constant		00BB(7)		A0	68	7	1
	08	REL	3F	AGC Gain at Constant Mode		00BB(6-1)		A0	68	6-1	28
	09	CRM	1	Carrier muting on/off		00BB(9)		A0	67	1	0
	0A	ACO	1	Audio Clock out on/off		0083(5)		A0	69	5	1
	0B	FP	7F	FM Prescale for non-M system		000E(14-8)		A0	6A	6-0	1B
	0C	FPM	7F	FM Prescale for M system		000E(14-8)		A0	6B	6-0	32
	0D	FH	7F	FM Prescale for HDEV		000E(14-8)		A0	6C	6-0	36
	0E	FHM	7F	FM Prescale for HDEV and M		000E(14-8)		A0	6D	6-0	65
	0F	WGP	7F	W/G Prescale		000E(14-8)		A0	6E	6-0	1C
	10	NIP	7F	NICAM Prescale		0010(14-8)		A0	6F	6-0	7F
	11	ERR	FF	Auto FM Switch Threshold		0021(10-3)		A0	70	7-0	50
	12	VOL	FF	Loud Speaker gain 7000h to 7ff0h		0000(15-4)		A4	62	7-0	6D
SVP	00	SBF	3F	SECAM BELL f0		1C (7-2)	CXA2139S(8AH)	A4	11	7-2	22
	01	HOS	0F	H Oscillation		0C (7-4)		A4	0C	7-4	7
	02	SHU	0F	Sub Hue Control	TV/Video	05 (7-2)		A4	2D/2F	5-2	8
	03	AFC	3	AFC Gain	TV/Video	0F (0)		A4	31/32	1-0	1
PIP	00	SDL	0F	Delay of Output SELECT		01 (6-3)	SDA9288X(D6H)	A4	1C	6-3	2
	01	PPH	FF	H Position of TOP-LEFT Pin P		01/02		A4	29	7-0	15
	02	PPV	FF	V Position of TOP-LEFT Pin P		03 (7-0)		A4	2A	7-0	2E
	03	YDL	7	Delay of Luminance Input		04 (2-0)		A4	1F	2-0	0
	04	HDI	0F	H Sync Delay for Inset		06 (3-0)		A4	21	3-0	0
	05	ISC	1	Inset Clock Selection		06 (4)		A4	21	4	1
	06	CLP	1	Clamp Pulse Selection		06 (5)		A4	21	5	1
	07	CLC	1	Clamp Cycle Selection		06 (6)		A4	21	6	0
	08	CON	0F	Contrast Adjustment for inset		09 (7-4)		A4	24	7-4	0
	09	PLL	3	H Position For A-ch		0D (6-5)		A4	28	6-5	2
	0A	PDV	0F	PIP V Pedestal Level		0E (7-4)		A4	57	7-4	0
	0B	PDU	0F	PIP U Pedestal Level		0E (3-0)		A4	57	3-0	0
TXT	00	TXH	3	Teletext Horizontal Position		10 (1-0)	SAA5261(58H)	A4	58	1-0	0
	01	TXV	3	Teletext Vertical Position		10 (5-4)		A4	58	5-4	0
OPM	00	OSH	3F	OSD H Position	Option-Misc	1F1	CXP750097(60H)	A0	27	7-2	0D
	01	COM	3	Comb Selection (0: None, 1: NTSC, 2: Digital, 3: 3D)				A0	50	7-6	2
	02	APC	1	APC Switch				A0	4F	5	1
	03	TSY	3	TV Sys at Auto TV Sys				A0	4F	4-3	0

Adjustment Item Table

TVG	Functionality		Range	Function	Table & Note	Register No. (Bit Range)	Device Name (Slave Address)	NVM Adddress			Remarks:
Category	No.	Name						Slave	Sub	Bit	Initial data for tables
OPM	04	MUT	1	No Signal Mute			CXP750097(60H)	A0	4F	0	0
	05	AFM	1	Auto FM Switch				A0	4F	1	1
	06	RFB	3	C-BPF Control				A0	50	5-4	0
	07	TVO	7	Tilt to V-Angle Offset				A0	50	2-0	2
	08	DBL	1	Disable Blueback Function				A0	4F	2	0
	09	SSO	3	Speed Search Option (0-Off, 1-4X, 2-6X, 3-8x)				A0	4F	7-6	1
	0A	SCH	7F	CH Selection for Shipping Condition	NTSC Models only			A0	3D	6-0	1
	0B	SCA	1	Cable/Air Selection for Shipping Condition	NTSC Models only			A0	3D	7	1
OPB	00	OP1	FF	Optional Bits 1 (see the specified sheet)	Option-Bits		CXP750097(60H)	A0	2D	7-0	FF
	01	OP2	FF	Optional Bits 2 (see the specified sheet)				A0	2E	7-0	67
	02	OP3	FF	Optional Bits 3 (see the specified sheet)				A0	2F	7-0	31
	03	OP4	FF	Optional Bits 4 (see the specified sheet)				A0	30	7-0	97

NOTE

- shaded items are fixed data.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.
  In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

ITEM INFORMATION
No. OPB0 OP1

Item	XTAL 4.43	XTAL 3.58	SECAM	2nd. Lang	B/G	I	D/K	M
KV-XA25M80	1	1	1	1	1	1	1	1
KV-XA25M83	1	1	1	1	1	1	1	1
KV-XA25N90	1	1	1	1	0	0	0	1

APPLICABLE FOR XF-L (14" AND 21") MODELS ONLY

No. OPB1 OP2

Item	TOP	NICAM	HDEV	Thai Bil	Dis Fav.	DVD Input	AV Input	
KV-XA25M80	0	0	0	0	0	1	1	1
KV-XA25M83	0	0	0	0	0	1	1	1
KV-XA25N90	0	0	0	0	0	1	1	1

AV Input 00 = no AV Input 01 = 1 AV Input
10 = 2 AV Input 11 = 3 AV Input
DVD Input Effective only when "AV Input" is set to 3 AV Input
Dis Fav. Disable Favorite Channel (Effective For XF-L (21" & 14") Models Only)

No. OPB2 OP3

Item	PIC Rotate*1	2199 Curve*1	Auto PIC	Auto TV sys	US ST	AV Mono*1	11 KEY	Colour SW*2
KV-XA25M80	0	0	1	0	0	0	0	1
KV-XA25M83	0	0	1	0	0	0	0	1
KV-XA25N90	0	0	1	0	1	0	0	1

PIC Rotate*1 PIC Rotation Switch 0 = disabled, 1 = enabled
2199 Curve*1 2199 volume Curve Selection 0 = Others, 1 = 2199 Volume Curve.
Auto PIC*3 Auto Picture Improvement 0 = off PNC1/PNC2, 1= activate PNC1/PNC2
A-TVsys Auto TV System in Auto Program 0 = disabled, 1 = enabled
US ST* USA Stereo 0 = disabled, 1 = enabled
AV MONO*1 AV Mono model 0 = Stereo, 1 = Mono
(No Balance & Surround selection)
11 Key Front Key Selection 0 = 7 key model, 1 = 11 key model
Color SW*2 Color Data Selection in Dynamic Mode 0 = 65 (No PIP), 1 = 57 (PIP)
Note: *1 - For XA21/XH29 Models Only
*2 - For XA34/29/25 Models Only
*3 - For PNC3, the enables are from service item APG & APB

No. OPB3 *OP4

Item	PNC2	Korean ST	Vid NTSC3.58	Wide	Video3	Chinese	Arabic	Thai
KV-XA25M80	1	0	0	1	0	1	1	1
KV-XA25M83	1	0	0	1	0	1	1	1
KV-XA25N90	1	0	0	1	0	0	1	0

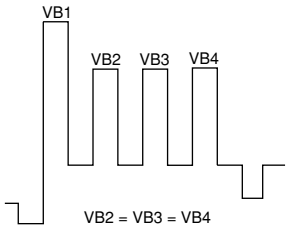
APPLICABLE TO XS ONLY - Sub Language Selection (Bit 0 - Bit 2)
Korean Stereo* Korean Stereo 0 = disabled, 1 = enabled
PNC2*2 Enable switch of PNC2 0 = disable, 1 = enable
Video NTSC3.58* (NTSC3.58) Video Color System 0 = Multi System, 1 = Single System
Wide Enable wide mode 0 = disable, 1 = enable

*Note : *APPLICABLE FOR NTSC MODELS ONLY

5-3. PICTURE QUALITY ADJUSTMENTS

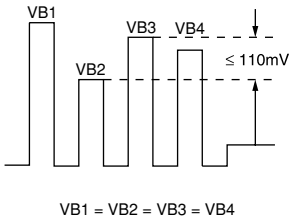
SUB COLOR ADJUSTMENT

1. Select Video.
2. Input a PAL color-bar.
3. Set to the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN305, A board.
5. Set to Service Mode and select SAJ 'SCL' with [1] and [4] of the commander then adjust to VB2=VB3=VB4 with [3] and [6].
6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust SAJ 'SCL' as step 3 to 5 when receiving NTSC color-bar.
8. Select the 'Wide' mode, write the 'same data-3 steps' for both PAL and NTSC input.



SUB HUE ADJUSTMENT

1. Select Video 1.
2. Input a NTSC 3.58 color-bar, into Video.
3. Set the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN305, A board.
5. Select SAJ 1 "SHU" with [1] and [4] of the commander by setting to Service Mode and adjust to VB1=VB2=VB3=VB4 with [3] and [6].



   The highest level of VB1,VB2,VB3,VB4 must be aligned at the same line. Ideal difference level between VB2 and VB3 should be within ± 110mV.

6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust SAJ 1 "SHU" as step 3 to 6 when receiving TV mode.

5-4. DEFLECTION ADJUSTMENT

NORMAL MODE (50Hz)

1. Set to Service Mode.
2. Using the [1] and [4] button, select category GEO (Service Mode).
3. Raise/lower the data using the [3] and [6] buttons. Select and adjust the following items to obtain optimum image.
   Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

WIDE MODE (50Hz)

4. Input PAL color bar.
5. Adjust condition change to WIDE MODE : ON.
6. Using the [1] and [3] button, select category GEO (Service Mode).
7. Copy (item from normal mode (50Hz)) adjusted data for the following item:
   Service Item

GEO :	01	HSZ	H POSITION
	05	VSZ	V POSITION
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY

8. Raise/lower data using [3] and [6] buttons, select and adjust the following items to obtain optimum image.
   Service Item

GEO :	00	HPS	H POSITION
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

9. After confirm WIDE MODE : ON – OFF.
10. Repeat same steps for NTSC input signal.

NORMAL MODE (60Hz)

11. Input 525/60Hz signal.
12. Using the [1] and [4] buttons select category GEO (Service Mode).
13. Select and adjust the following items to obtain obtimum image.
    Raise/lower the data with the [3] and [6] buttons.
    Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

WIDE MODE (60Hz)

14. Input monoscope signal.
15. Adjust condition change to WIDE MODE: ON.
16. Using the [1] and [4] button select category GEO (Service Mode).
17. Copy (item from NORMAL MODE (60Hz)) adjusted data for the following items:
    Service Item

GEO :	01	HSZ	H SIZE
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY

18. Raise/lower the data with the [3] and [6] buttons. Select and adjust the following items to obtain optimum image.
    Service Item

GEO :	00	HPS	H POSITION
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

19. After confirm WIDE MODE : ON – OFF.

Note:
For Deflection Adjustment, set PICTURE MODE to "SOFT".

5-5. H-TRAPEZOID ADJUSTMENT

1. Receive cross hatch/dot signal.
2. Adjust RV1801 on C6 board to make H-Trapezoid distortion best.

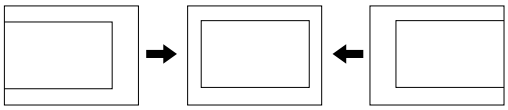
5-6. A BOARD ADJUSTMENT AFTER IC003 REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.
   In cases where items are not well adjusted, rectify the fine adjustment.
   Write the data per each item number ([MUTING] + [0]).
4. Select item numbers “OPB00” (OP1), “OPB01” (OP2), "OPB 02" (OP3) and "OPB 03" (OP4) respectively set the bit per model with command buttons [3] and [6].
5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory.
   (This will also cancel Service Mode.)

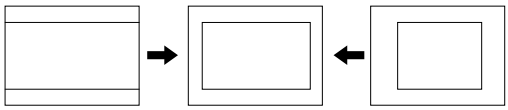
5-7. PICTURE DISTORTION ADJUSTMENT (1)

Item Number 00 – 0B

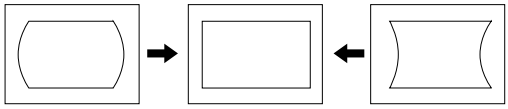
GEO 0 HPS (H POSITION)



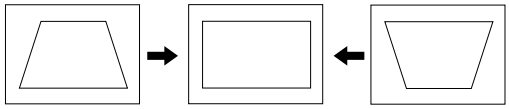
GEO 1 HSZ (H SIZE)



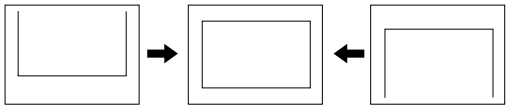
GEO 2 PAP (PIN AMP)



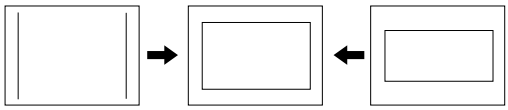
GEO 3 TLT (TRAPEZIUM)



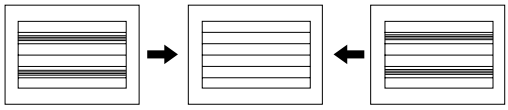
GEO 4 VPS (V POSITION)



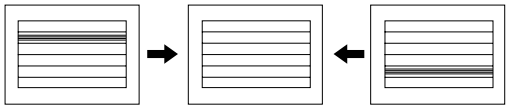
GEO 5 VSZ (V SIZE)



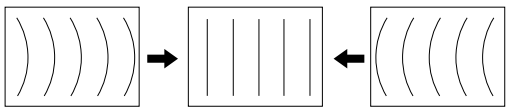
GEO 6 SCO (VERTICAL S-Correction)



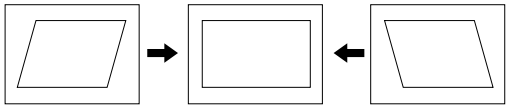
GEO 7 VLN (V LINEARITY)



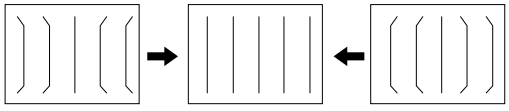
GEO 8 BOW (AFC.BOW)



GEO 9 AGL (AFC.ANGLE)

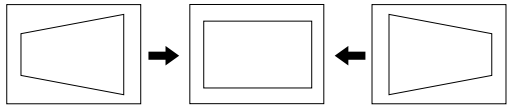


GEO 0A UPN (UPPER CORNER PIN)
GEO 0B LPN (LOWER CORNER PIN)



PICTURE DISTORTION ADJUSTMENT (2)

H-TRAPEZOID (DAC 4 HTR)



MEMO

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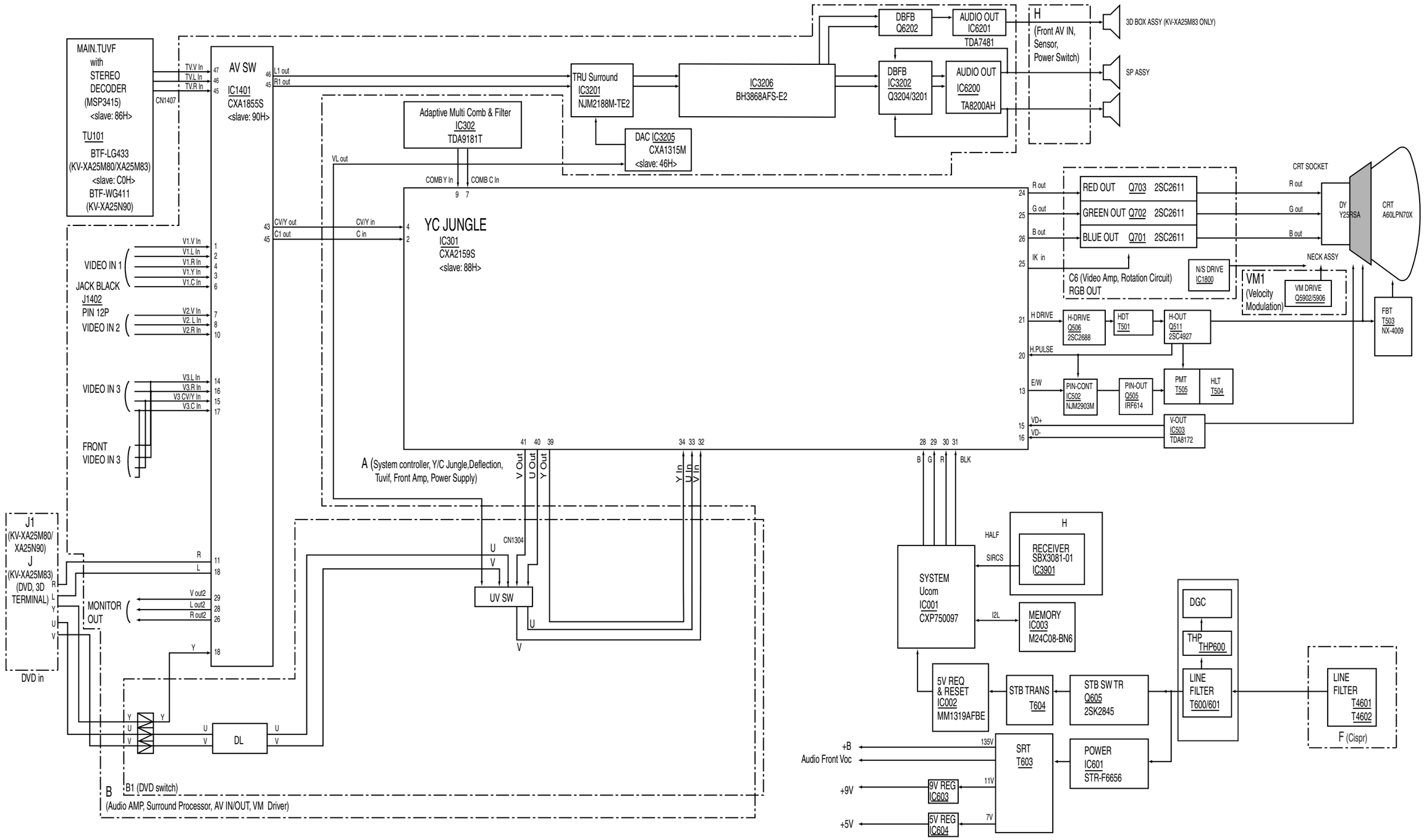
SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM



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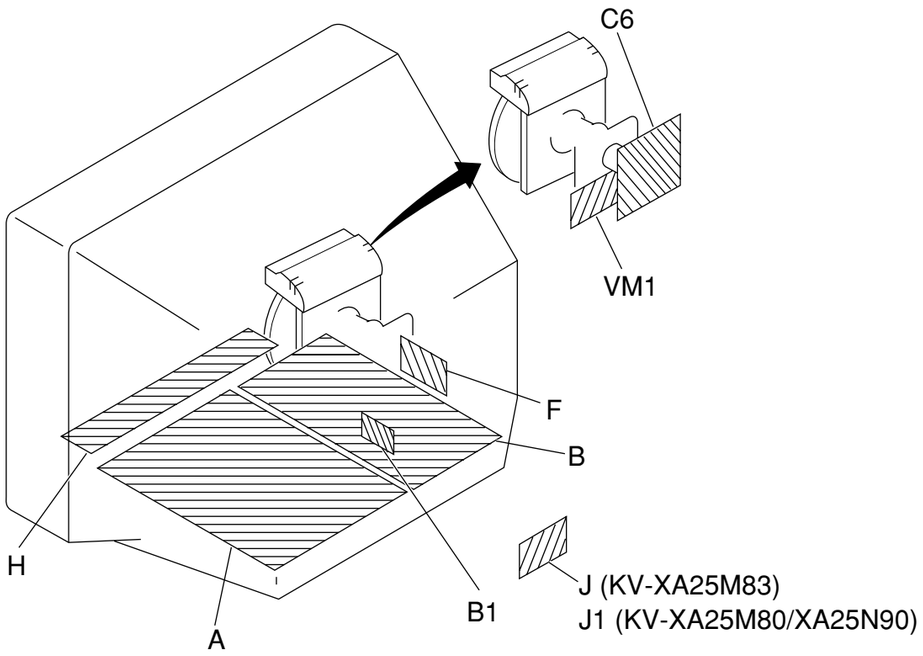
6-2. CIRCUIT BOARDS LOCATION



6-3. SCHEMATIC DIAGRAM

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W (CHIP: 1/10W)

- : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation or adjustment for rrepair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Redings are taken with a color-bar signal input.**
- **no mark : Common**
- **underline : PAL**
- **( ) : SECAM**
- **[ ] : NTSC 3.58**
- **<< >> : NTSC 4.43**
- **Readings are taken with a 10M digital m ultimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltage are in V.**
- **✻ : Cannot be measured.**
- **Circled numbers are waveform references.**
- **▬▬ : B +bus.**
- **▪ ▪ ▪ : B –bus.**
- **⇨ : signal path.**

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✻	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The component identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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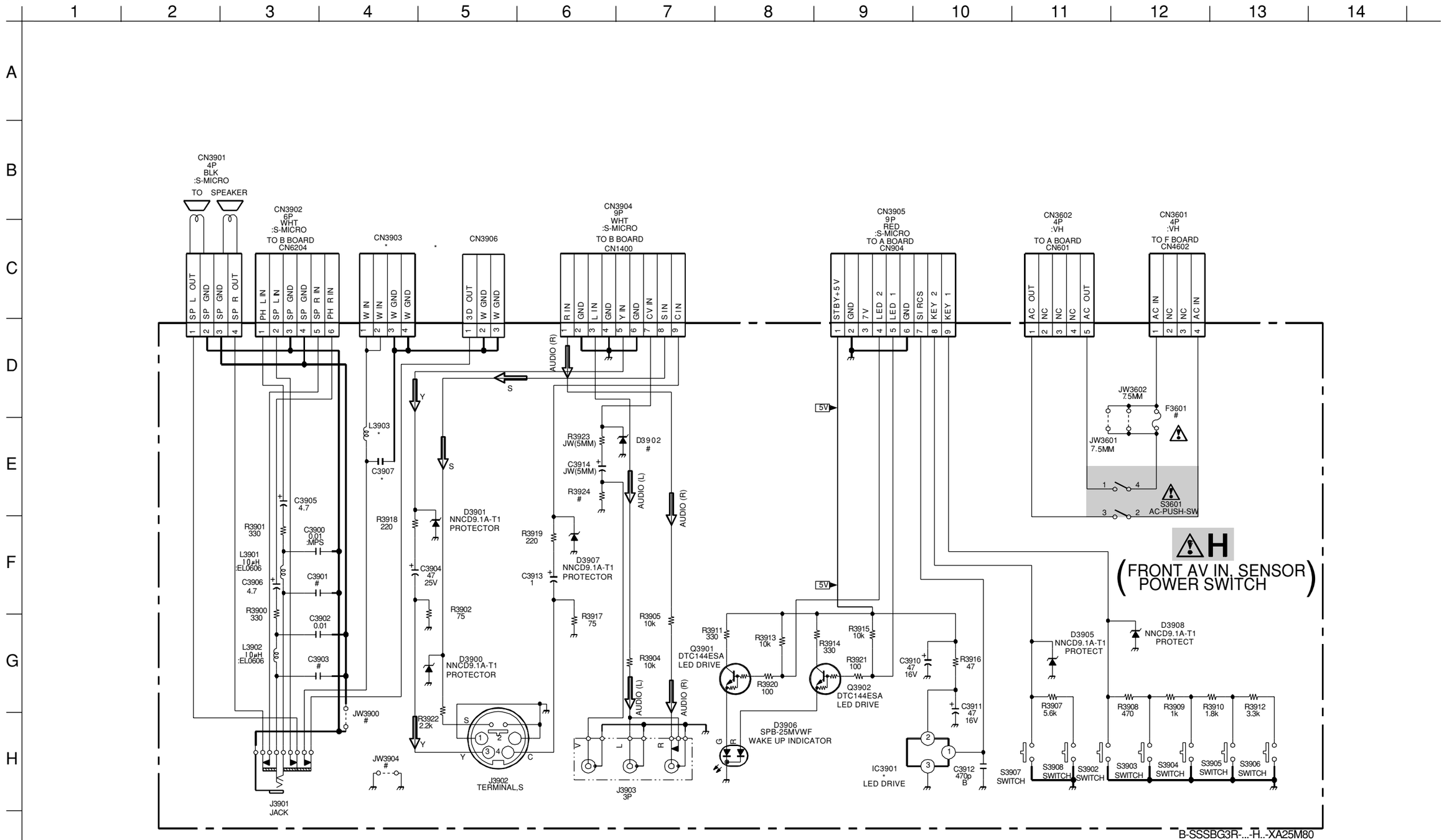
(1) Schematic Diagram of H Board



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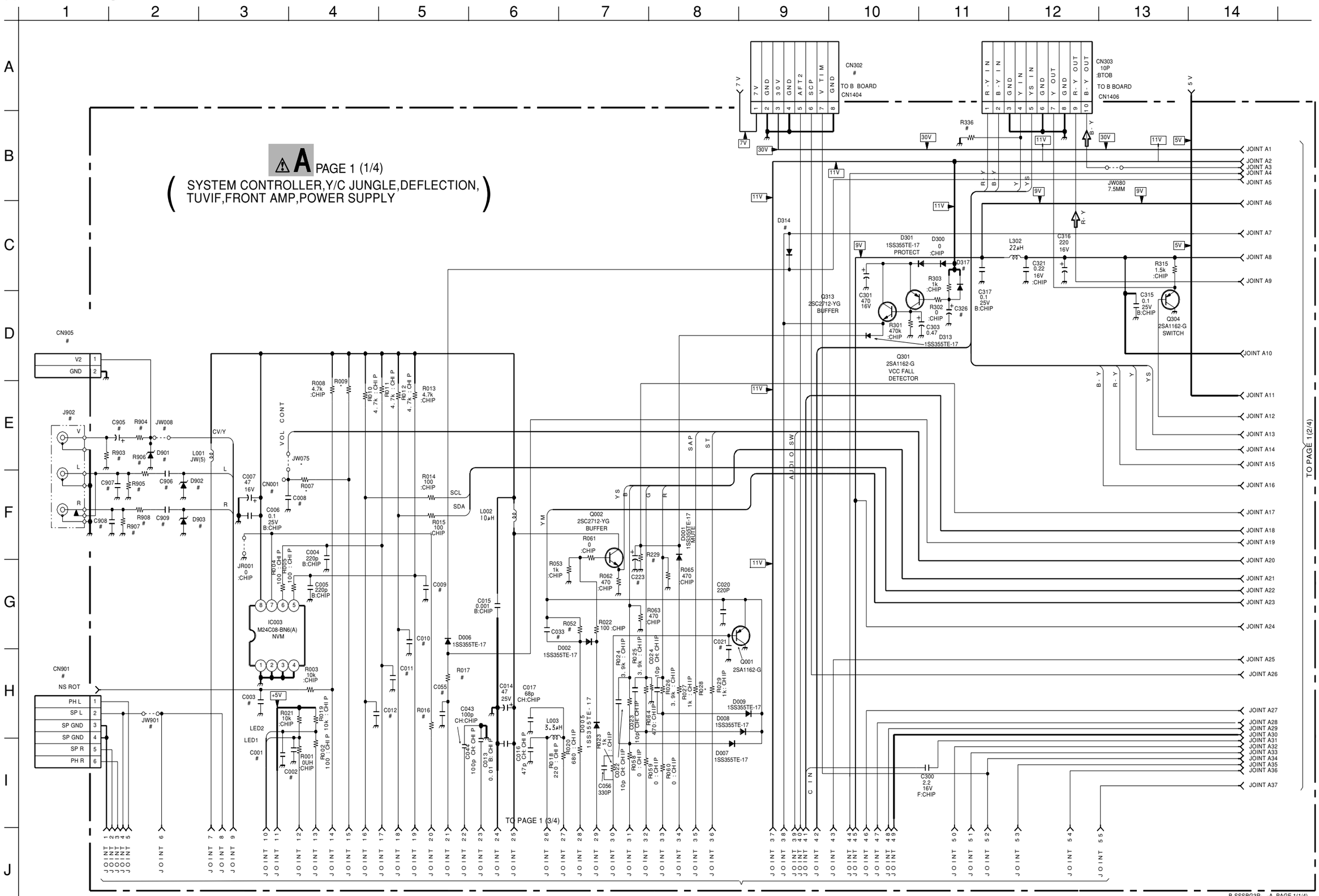
(2) Schematic Diagram of A Board



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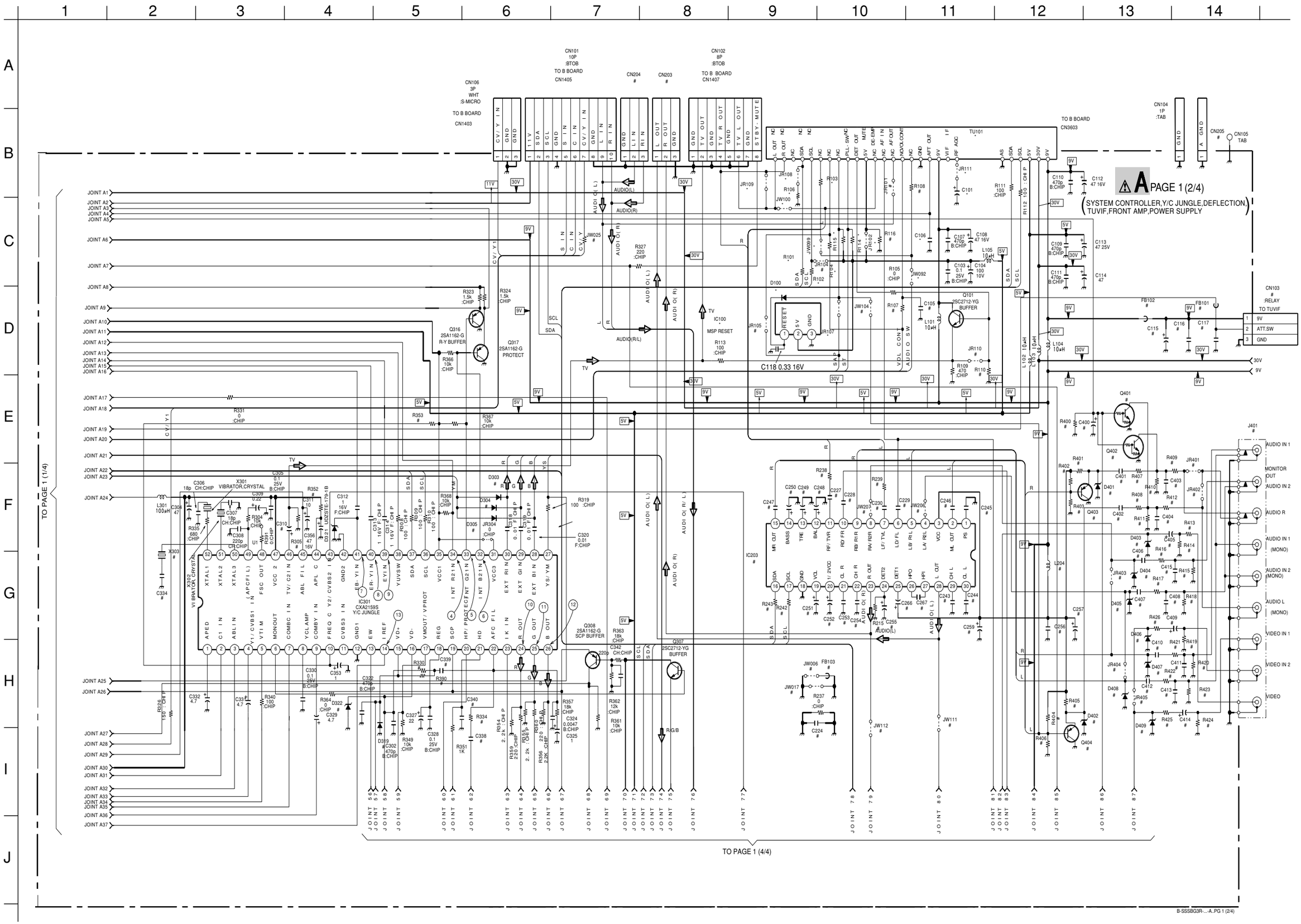

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TO PAGE 1 (1/4)

PAGE 1 (3/4)

(SYSTEM CONTROLLER,Y/C JUNGLE,DEFLECTION, TUVIF,FRONT AMP,POWER SUPPLY)

IC001 SYSTEM CONTROLLER

IC302 TDA9181T COMB FILTER

IC002 MM1319AFBE RESET SUREG

X001 CST10.00MX VIBRATOR,CERAMIC

Q302 2SC2712-YG AMPLIFIER

Q303 2SA1162-G BUFFER

Q305 2SA1162-G BUFFER

Q306 2SC2712-YG AMPLIFIER

Q308 UN2213 SWITCH

Q310 2SC2712-YG FSC DRIVER

Q311 2SC2712-YG INVERTER

Q312 2SA1162-G

D315 1SS355TE-17

D316 RD7.5SB1

CN904 9P WHT :S-MICRO TO H BOARD CN3905

CN306 4P WHT :S-MICRO TO VM1 BOARD CN5901

JOINT A38 JOINT A39 JOINT A40 JOINT A41 JOINT A42 JOINT A43 JOINT A44 JOINT A45 JOINT A46 JOINT A47 JOINT A48 JOINT A49 JOINT A50 JOINT A51 JOINT A52 JOINT A53 JOINT A54 JOINT A55 JOINT A56 JOINT A57 JOINT A58 JOINT A59

TO PAGE 1 (4/4)

B-SSSBG3R-...--A..PG 1 (3/4)

STBY 7V ST-BY NS MUTE ABL 11V +B

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A PAGE 1 4/4
(SYSTEM CONTROLLER,Y/C JUNGLE,DEFLECTION,
TUVIF,FRONT AMP,POWER SUPPLY)

TO PAGE 1 (2/4)

TO PAGE 1 (3/4)

JOINT A38
JOINT A39
JOINT A40
JOINT A41
JOINT A42
JOINT A43
JOINT A44
JOINT A45
JOINT A46
JOINT A47
JOINT A48
JOINT A49
JOINT A50
JOINT A51
JOINT A52
JOINT A53
JOINT A54
JOINT A55
JOINT A56
JOINT A57
JOINT A58
JOINT A59

D312 1SS355TE-17
D311 1SS355TE-17
D320 UDZSTE-179
D308 1SS355TE-17 PROTECT
D309 RU-1P PROTECT
D307 1SS355TE-17 PROTECT
D306 1SS355TE-17 PROTECT

R377 1M :CHIP
R333 #
R306 #
R350 2.2K
R370 220 :CHIP
R376 22k :CHIP
C337 2.2
R322 220 :CHIP
R332 220 :CHIP
R365 220 :CHIP
R375 #

Q315 UN2213 SWITCH

AUDIO(R/L)

C357 0.1 25V B:CHIP
R358 1k :CHIP
R381 0 :CHIP
R325 #
JR308 0 :CHIP
L303 100uH
C351 10
U1
FB300 0UH

C214 #
C217 #

SDA
SCL

R225 220 :CHIP
R226 220 :CHIP
R227 220 :CHIP

CN202 4P WHT :MINI
4 GND
3 B-INT
2 SDA
1 SCL

Q202 #
Q201 #
C264 #
C225 #
C203 #
R206 #
R205 #
JW201 #
R207 #
R209 #
C265 #
C202 #
C207 #
R203 #
R204 #
R208 #
R202 #
C205 #
C206 #
C204 #
C226 #

IC201 #
GND GND/NF2 NF2/RIN RIN/GND LIN NF1 RIPPLE VCC2 GND BS1 LOUT VCC1 ROUT BS2
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

JW203 #
JW202 #
JW204 #
JW205 #
R212 #
C212 #
C213 #
C209 #
C210 #
C211 #
R211 #
R210 #
C208 #
JR202 #
JR203 #
JR204 #
R214 #
R230 #
Q204 #
R213 #
C220 #
C221 #

R228 #
C219 #
PS200 #
C216 #
C215 #
R234 #
C218 #
R231 #
Q206 #
Q203 #
Q207 #
Q205 #
D203 #

R G B

Y S B G R

AUDIO(R)
AUDIO(L)

CN310 - TO U1
1 GND
2 FSC

E W
V D+
V D-

H D
H P
9 V

CN305 6P WHT :S-MICRO TO C6 BOARD CN703
6 9V
5 IK
4 GND
3 R
2 G
1 B

CN301 #
7 7V
6 CVBS
5 GND
4 GND
3 SCP
2 VP
1 GND

CN308 # TO B6 BOARD CN8401
4 9V
3 AGND
2 CVSS
1 MOMUTE

CN307 #
7 SCL
6 SDA
5 GND
4 BLK
3 BLUE
2 GREEN
1 RED

CN309 #
3 GND
2 CVBS
1

CN201 5P WHT :S-MICRO TO B BOARD CN6206
7 ROUT
6 GND
5 LOUT
4 GND
3 PROT
2 MUTE
1 9V

CN608 4P TO B BOARD CN6200
1 AUDI-GND
2 AUD GND
3 AUD +VCC
4 AUD +VCC

CN107 # TO B6 BOARD CN8403
3 VIDEO 1
2 V GND
1 VIDEO 1

B-SSSBG3R-...-A..PG1(4/4)

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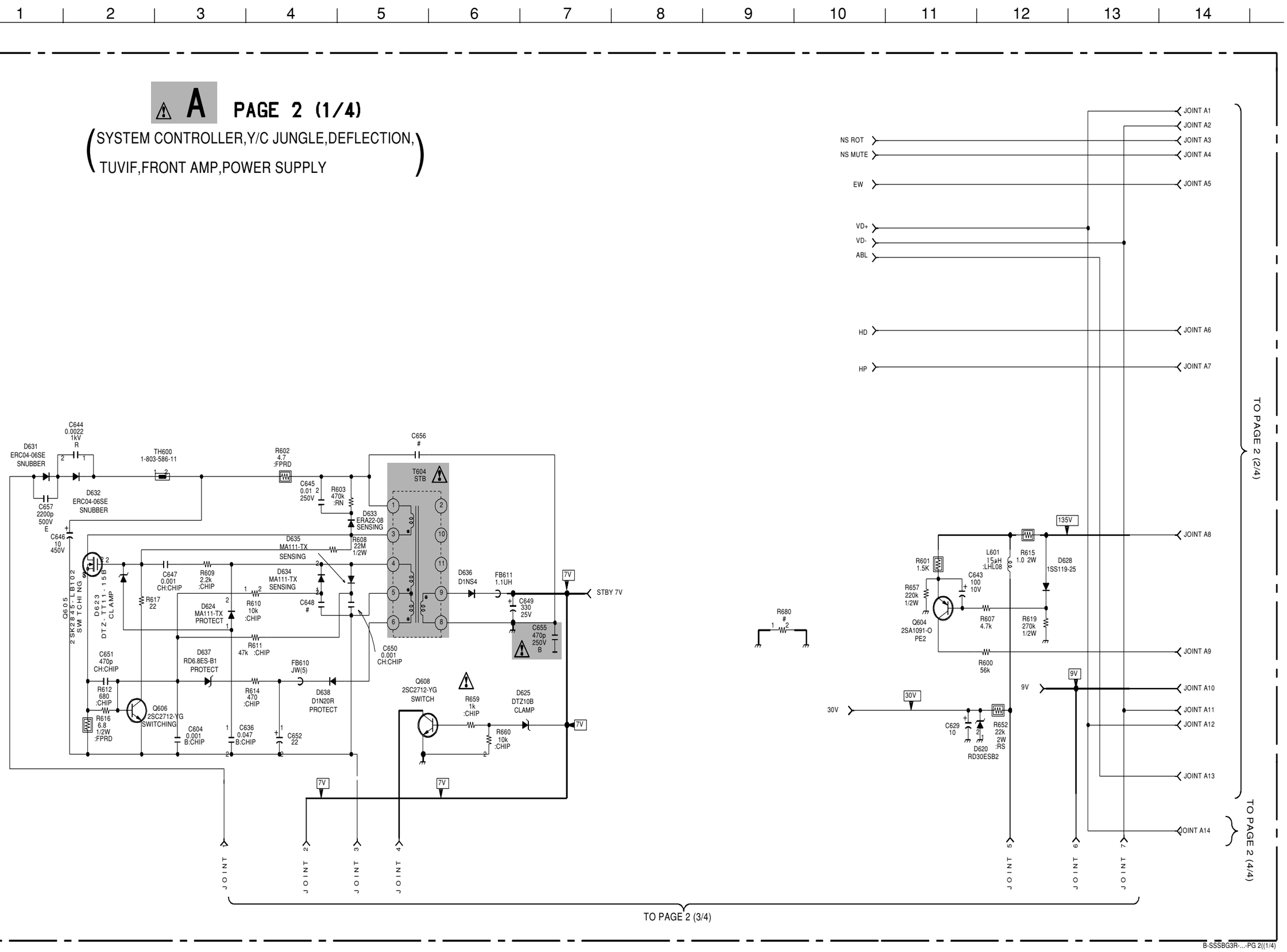
⚠ A PAGE 2 (1/4)

(SYSTEM CONTROLLER,Y/C JUNGLE,DEFLECTION,
TUVIF,FRONT AMP,POWER SUPPLY)



B-SSSBG3R-...-PG 2((1/4)

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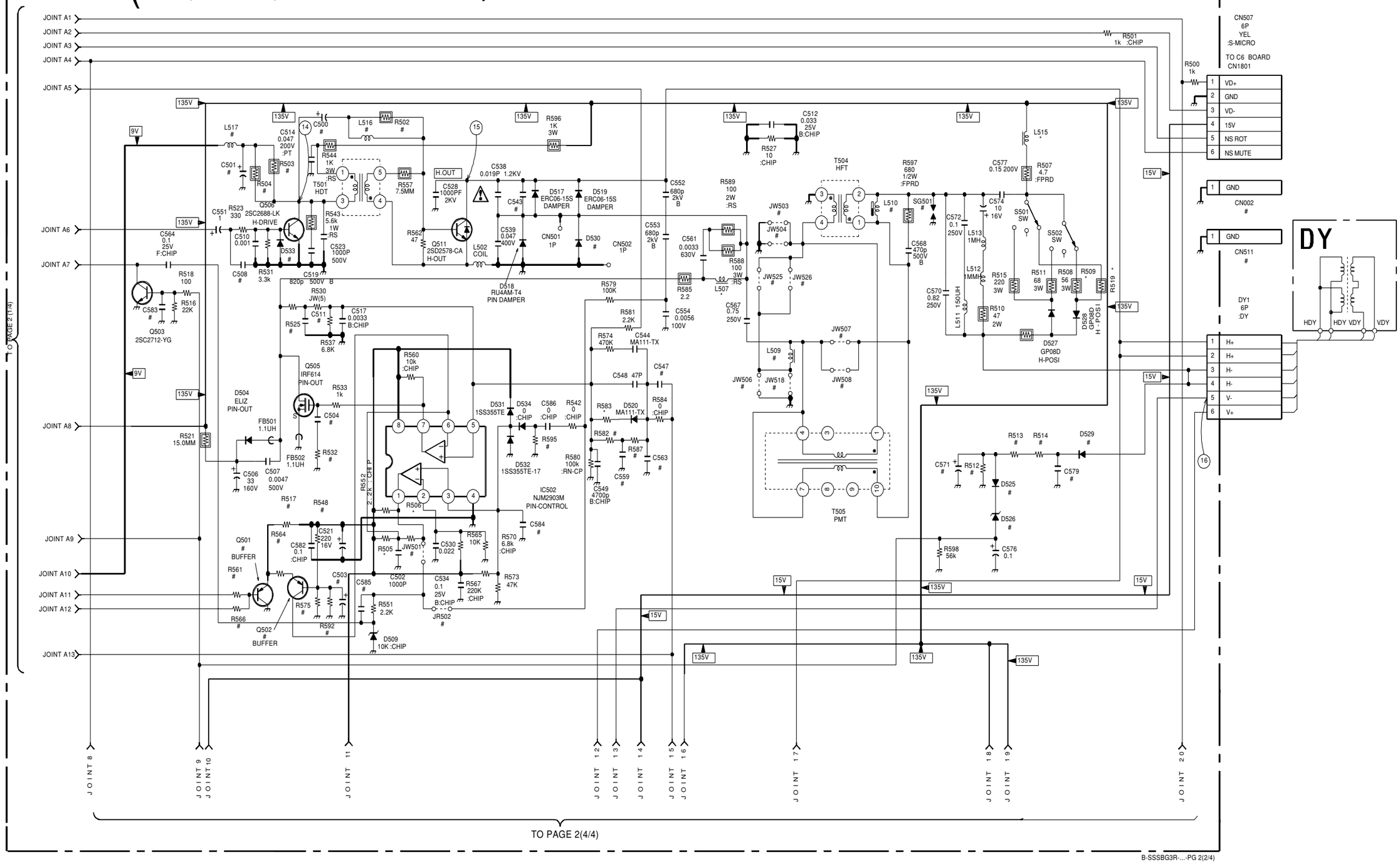
⚠ A PAGE 2 (2/4)

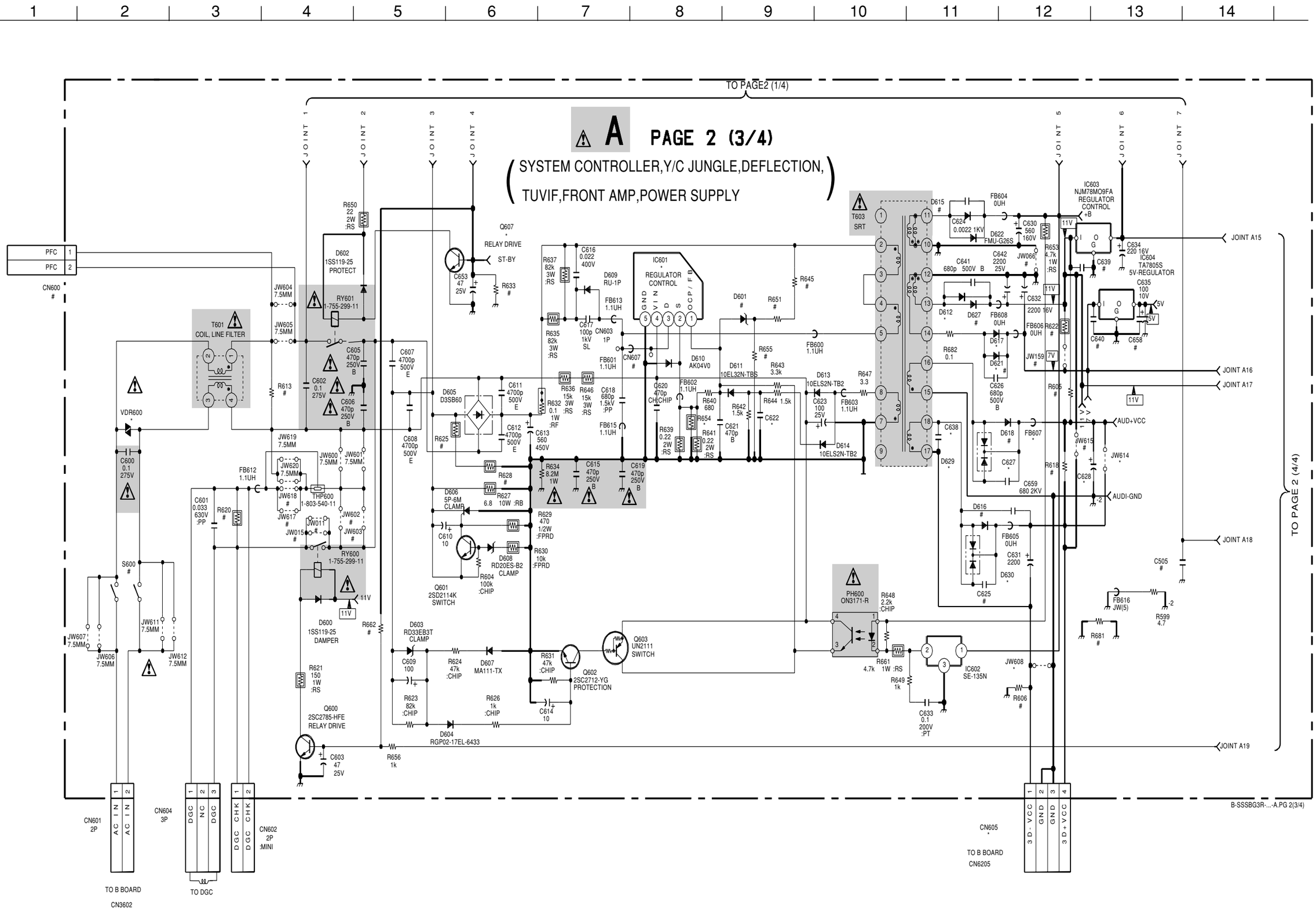
(SYSTEM CONTROLLER,Y/C JUNGLE,DEFLECTION,
TUVIF,FRONT AMP,POWER SUPPLY)



KV-XA25M80/XA25M83/XA25N90 RM-954 RM-914

A PAGE 2 (3/4)

(SYSTEM CONTROLLER,Y/C JUNGLE,DEFLECTION, TUVIF,FRONT AMP,POWER SUPPLY)



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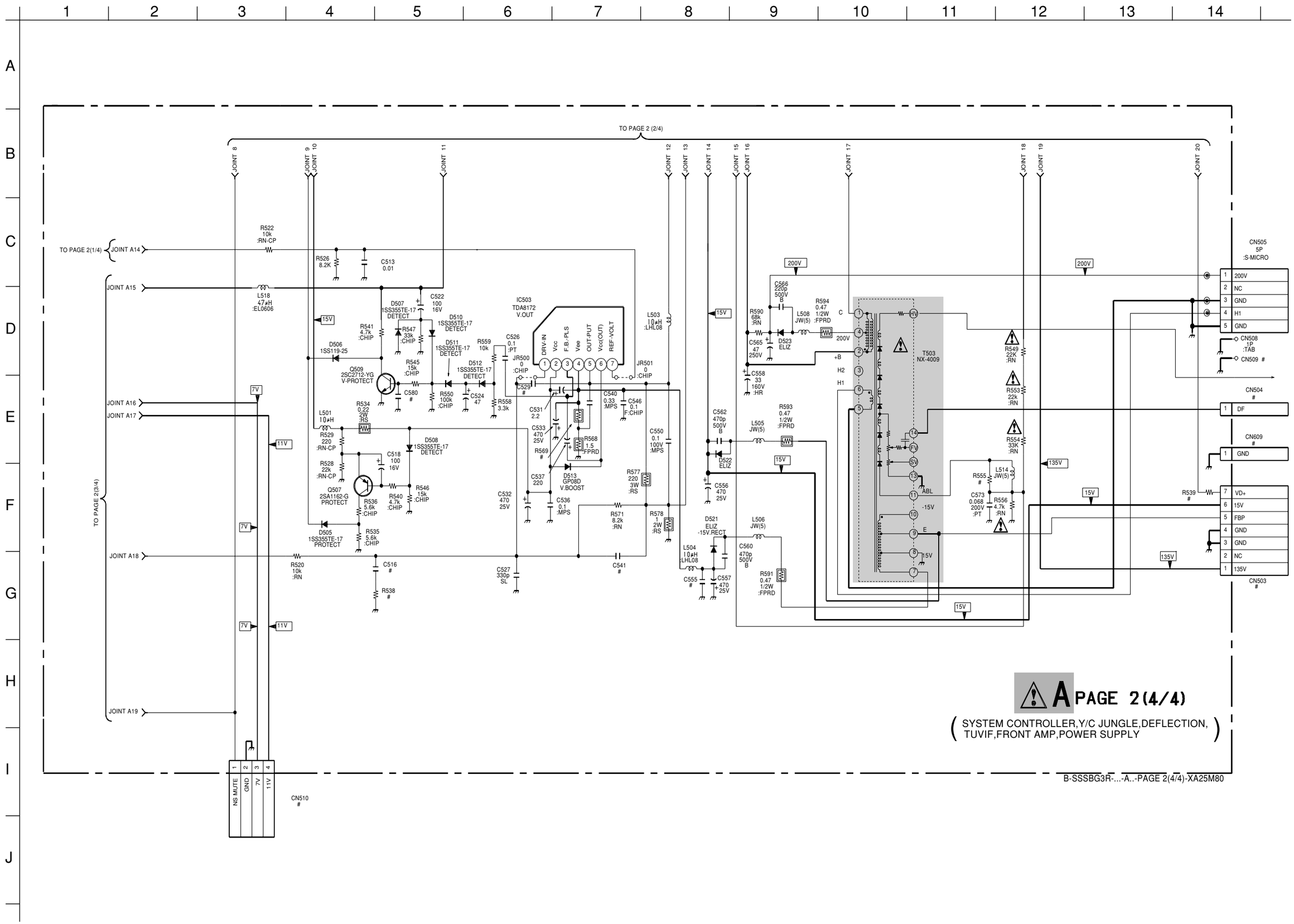
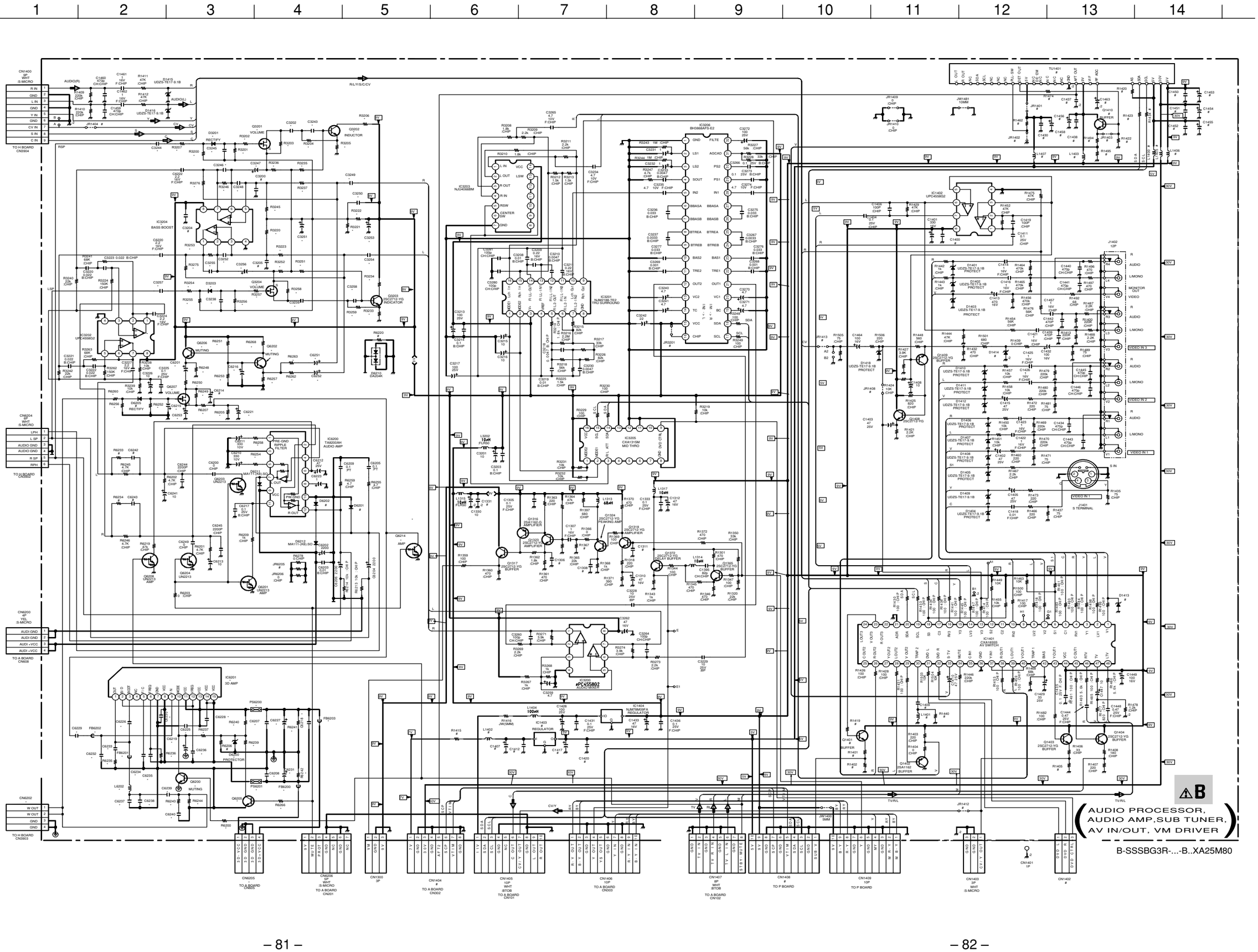


KV-XA25M80/XA25M83/XA25N90 RM-954 RM-914

(3) Schematic Diagram of B Board



KV-XA25M80/XA25M83/XA25N90
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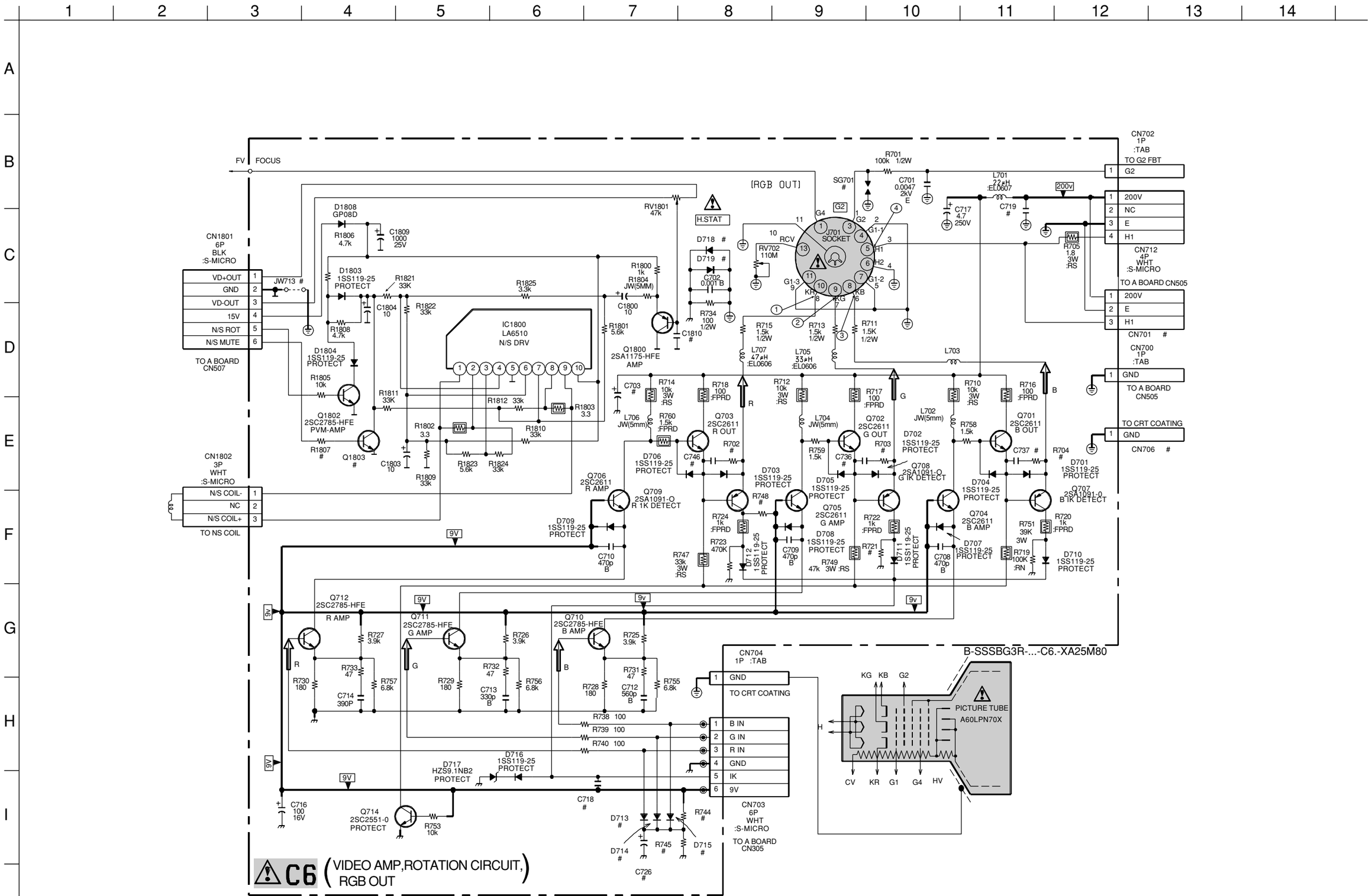
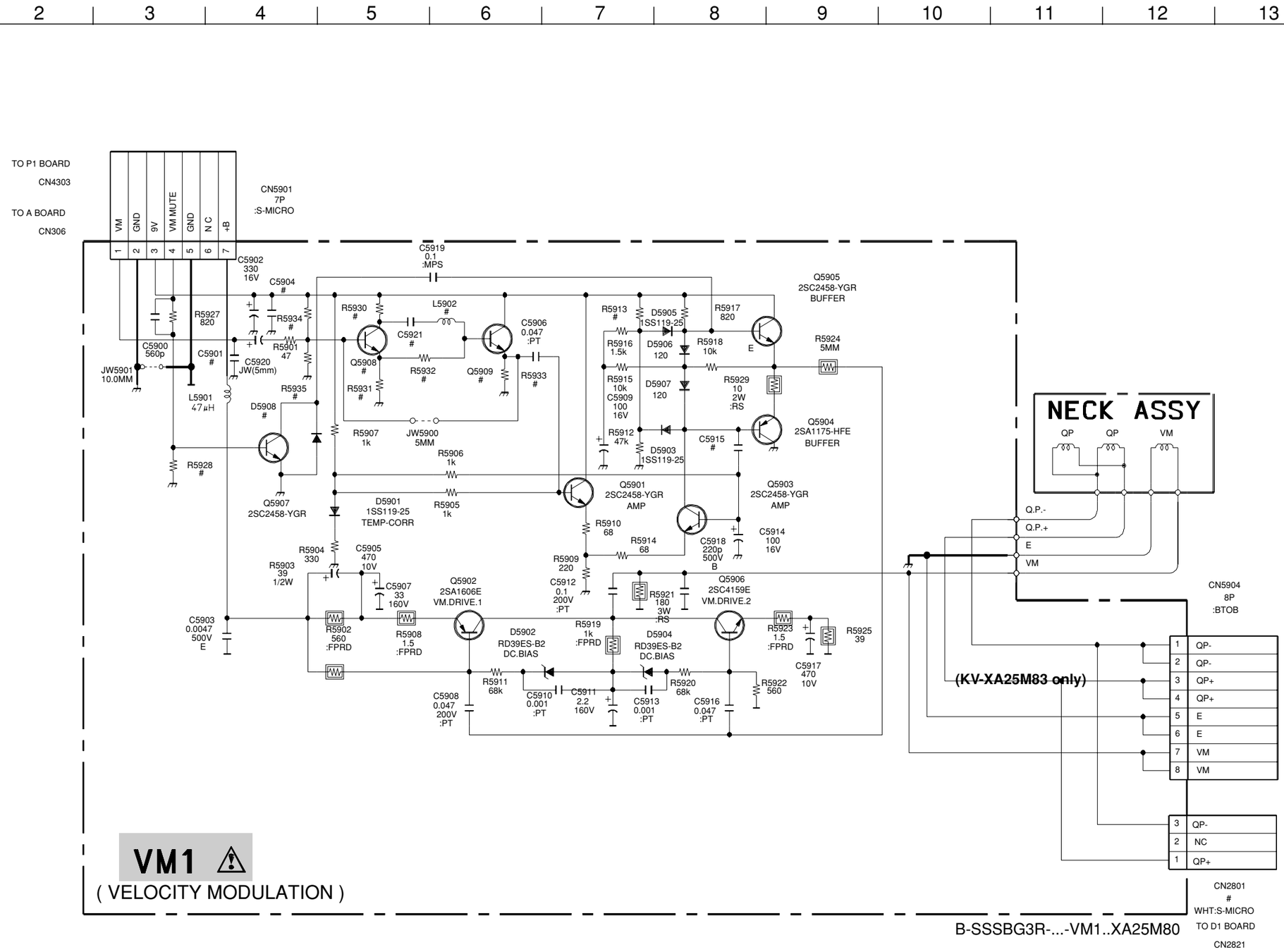
(4) Schematic Diagram of C6 Board



KV-XA25M80/XA25M83/XA25N90 RM-954 RM-914

(5) Schematic Diagram of VM1 Board



KV-XA25M80/XA25M83/XA25N90
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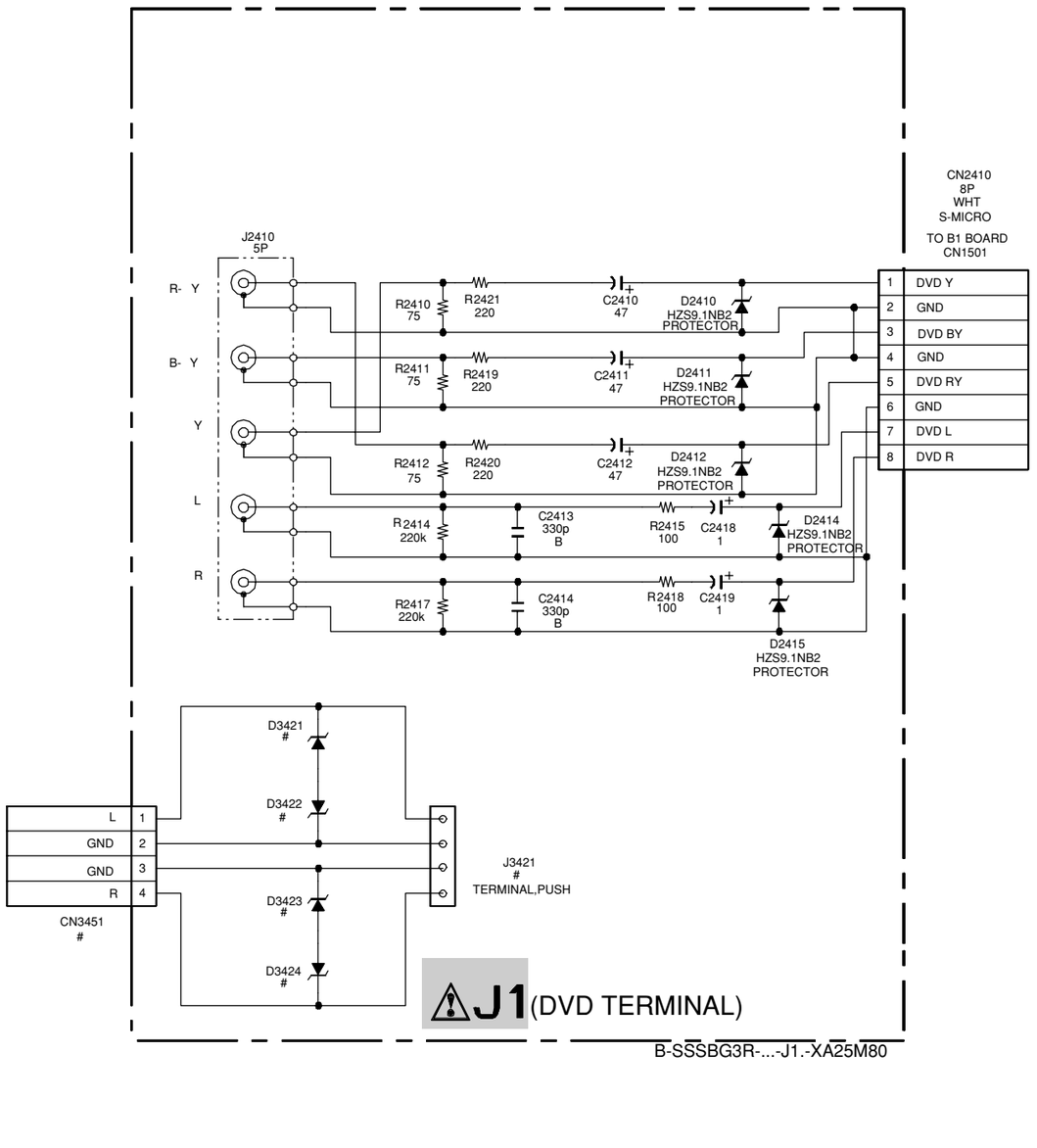
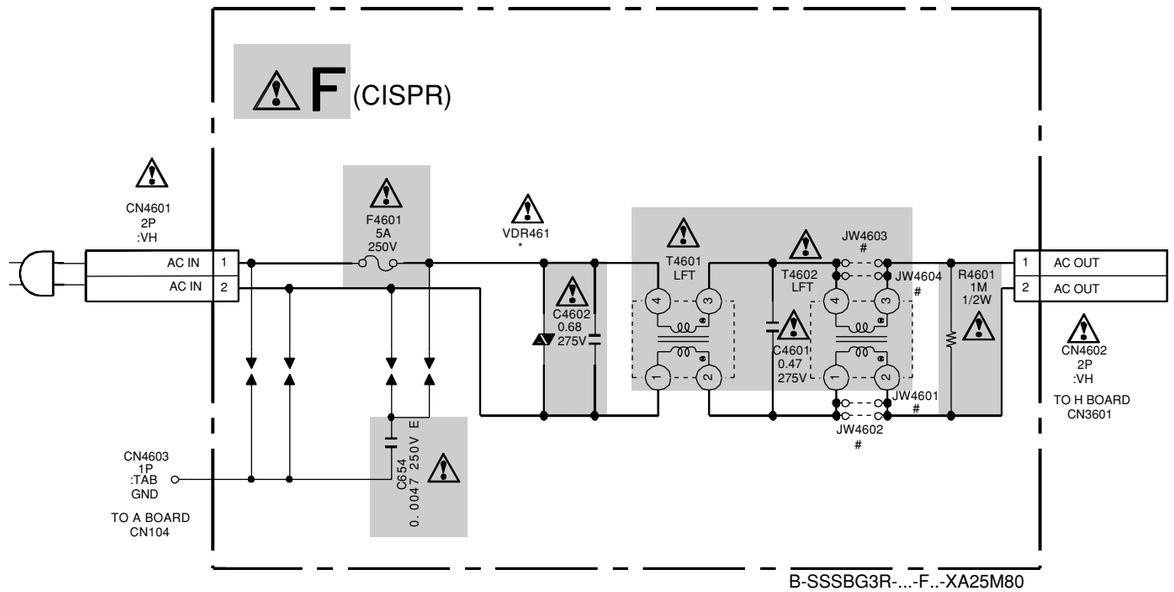
(6) Schematic Diagrams of J1 and F Boards

(KV-XA25M80/XA25N90)

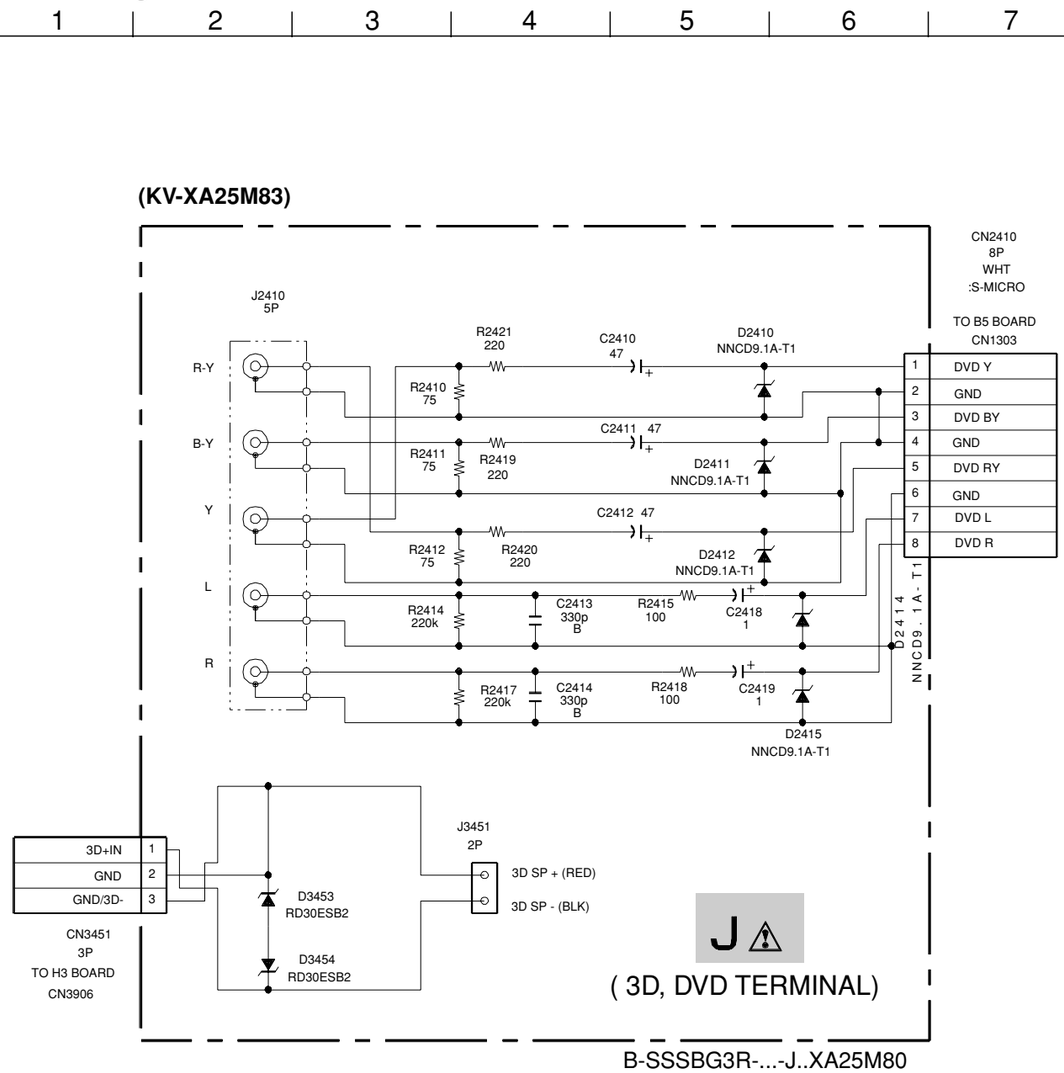




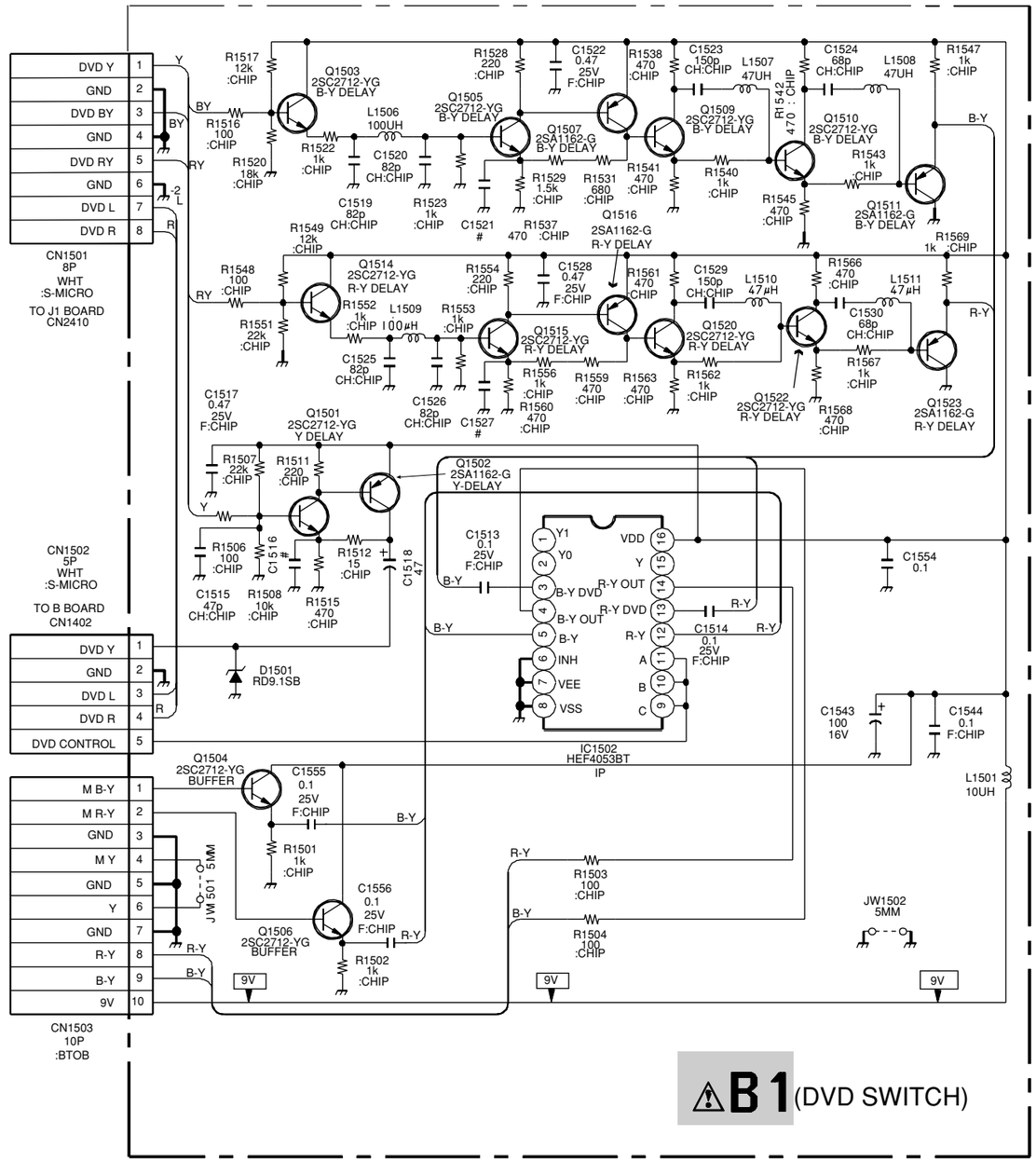
KV-XA25M80/XA25M83/XA25N90 RM-954 RM-914

(7) Schematic Diagram of B1 and J Boards

(KV-XA25M83)



B-SSSBG3R-...-J..XA25M80



B-SSSBG3R-...-B1..XA25M80

A BOARD ✻ MARK LIST

	KV-XA25M80	KV-XA25M83	KV-XA25N90
C101	#	#	10
C106	#	#	0.047
C622	0.0015 :CHIP	0.0015 :CHIP	#
C627	#	680 500V :CHIP	#
C628	#	1000 35V	#
C638	#	4700P 500V	#
CN605	#	4P	#
CN306	4P	4P	#
D100	MA111-TX	MA111-TX	#
D612	D5S6M	D5S6M	#
D617	#	#	30DF2N-FC5
D621	D5S6M	D5S6M	#
D627	#	#	30DF2N-FC5
D629	#	D5LC20U	#
D630	D5LC20U	FMX-12X	D5LC20U
FB607	#	0 :CHIP	#
FB615	1.1*u*H	1.1*u*H	0*u*H
IC001	CXP750097-032S	CXP750097-032S	CXP750097-041S
IC100	S80743AL-A7-S	S80743AL-A7-S	#
IC601	STR-F6656	STR-F6656	STR-F6456S
JR102	0 :CHIP	0 :CHIP	#
JR108	#	#	0 :CHIP
JR109	0 :CHIP	0 :CHIP	#
JR111	#	#	0 :CHIP
L302	2.2*u*H	2.2*u*H	1.0*u*H
L507	0*u*H	0*u*H	*10u*H
L515	10MMH	10MMH	COIL WITH CORE
Q607	2SD2144S-UVM	2SD2144S-UVM	2SC3576
R006	#	#	39K :CHIP
R007	#	#	220 :CHIP
R009	#	#	4.7K
R028	#	#	1K :CHIP
R030	#	#	100 :CHIP
R037	100 :CHIP	100 :CHIP	15K :CHIP
R101	100 :CHIP	100 :CHIP	#
R102	100 :CHIP	100 :CHIP	#
R103	#	#	100 :CHIP
R104	#	#	100 :CHIP
R106	#	#	1.0K :CHIP
R114	#	#	4.7K
R115	#	#	4.7K
R505	220K :CHIP	220K :CHIP	150K :RN-CP
R506	47K :CHIP	47K :CHIP	27K :CHIP
R509	68 3W :RS	68 3W :RS	120 3W :RS
R519	150 3W :RS	150 3W :RS	220 3W :RS
T601	COIL LINE FILTER	COIL LINE FILTER	TRANS. LINER FILTER
TU101	BTF-LG433	BTF-LG433	BTF-WG411
VDR600	#	#	ERZV14D621

Note) The parts indicated as '#" in this circuit diagram are not listed here, as they are not used these models.

F BOARD ✻ MARK LIST

	KV-XA25M80	KV-XA25M83	KV-XA25N90
T601	COIL LINE FILTER	COIL LINE FILTER	TRANS. LINER FILTER
VDR461	ERZV14D621	ERZV14D621	#

Note) The parts indicated as '#" in this circuit diagram are not listed here, as they are not used these models.

H BOARD ✻ MARK LIST

	KV-XA25M80	KV-XA25M83	KV-XA25N90
C3907	#	0.68 :PP	#
CN3903	#	4P	#
CN3906	#	3P	#
IC3901	SBX1981-51RP	SBX1981-51RP	SBX3081-21
L3903	#	68*u*H	#

Note) The parts indicated as '#" in this circuit diagram are not listed here, as they are not used these models.

B BOARD ✻ MARK LIST

	KV-XA25M80	KV-XA25M83	KV-XA25N90
C1443	#	#	470P :CHIP
C3202	0.33 :PP	#	0.33 :PP
C3238	0.47 25V	#	0.47 25V
C3239	0.33 :PP	#	0.33 :PP
C3243	0.033 25V :CHIP	#	0.033 25V :CHIP
C3244	1 16V :CHIP	#	1 16V :CHIP
C3245	0.47 25V	#	0.47 25V
C3246	47P :CHIP	#	47P :CHIP
C3247	4.7	#	4.7
C3248	100P :CHIP	#	100P :CHIP
C3249	2.2 16V :CHIP	0 :CHIP	2.2 16V :CHIP
C3250	1 16V :CHIP	#	1 16V :CHIP
C3251	10	#	10
C3252	100P :CHIP	#	100P :CHIP
C3253	100 16V	#	100 16V
C3254	2.2 16V :CHIP	0 :CHIP	2.2 16V :CHIP
C3255	47P :CHIP	#	47P :CHIP
C3256	4.7	#	4.7
C3257	1 16V :CHIP	#	1 16V :CHIP
C3258	0.033 25V :CHIP	#	0.033 25V :CHIP
C6201	#	10	#
C6207	#	0.1 25V :CHIP	#
C6208	#	0.1 25V :CHIP	#
C6215	#	100 16V	#
C6216	#	1	#
C6218	#	0.1 25V :CHIP	#
C6219	#	2.2	#
C6221	#	0.47	#
C6225	#	0.1 25V :CHIP	#
C6226	#	0.1 25V :CHIP	#
C6227	#	2200	#
C6228	#	0.1 25V :CHIP	#
C6229	#	2.2 16V :CHIP	#
C6230	#	0.1 25V :CHIP	#
C6231	#	2200	#
C6232	#	1000P :CHIP	#
C6233	#	680P :CHIP	#
C6234	#	4700P :CHIP	#
C6235	#	100P :CHIP	#
C6236	#	0.1 25V :CHIP	#
C3237	#	1.0 :PP	#
C6238	#	1000P :CHIP	#
C6239	#	2200 25V	#
C6240	#	0.1	#
C6251	#	22	#
C6252	#	22	#
C6253	#	0.47	#
CN6202	#	4P	#
CN6205	#	4P	#
D3201	1SS355TE-17	#	1SS355TE-17
D3203	1SS355TE-17	#	1SS355TE-17
D6200	#	RD5.1ES-B3	#
FB6201	#	1.1*u*H	#
FB6202	#	1.1*u*H	#
IC3204	UPC4558G2	#	UPC4558G2
IC6201	#	TDA7481	#
L6202	#	65*u*H	#
PS6200	#	LINK, IC	#
PS6201	#	LINK, IC	#
Q3201	2SK246-GR	#	2SK246-GR
Q3202	2SC2712-YG	#	2SC2712-YG
Q3204	2SK246-GR	#	2SK246-GR
Q6200	#	2SA1162-G	#

	KV-XA25M80	KV-XA25M83	KV-XA25N90
Q6202	#	2SA1162-G	#
Q6205	#	2SA1162-G	#
Q6206	#	2SA1162-G	#
Q6207	#	2SC246-GR	#
Q6214	#	UN2213	#
R3200	1.0M :CHIP	#	1.0M :CHIP
R3201	1.0M :CHIP	#	1.0M :CHIP
R3202	100K :CHIP	#	100K :CHIP
R3203	1.0M :CHIP	#	1.0M :CHIP
R3204	3.3K :CHIP	#	3.3K :CHIP
R3205	6.8K :CHIP	#	6.8K :CHIP
R3206	390 :CHIP	#	390 :CHIP
R3207	10K :CHIP	#	10K :CHIP
R3220	100K :CHIP	#	100K :CHIP
R3221	10K :CHIP	#	10K :CHIP
R3222	10K :CHIP	#	10K :CHIP
R3223	680 :CHIP	#	680 :CHIP
R3233	6.8K :CHIP	#	6.8K :CHIP
R3234	390 :CHIP	#	390 :CHIP
R3235	150K :CHIP	#	150K :CHIP
R3236	470K :CHIP	#	470K :CHIP
R3237	680 :CHIP	#	680 :CHIP
R3245	100K :CHIP	#	100K :CHIP
R3246	680 :CHIP	#	680 :CHIP
R3251	150K :CHIP	#	150K :CHIP
R3252	470K :CHIP	#	470K :CHIP
R3253	680 :CHIP	#	680 :CHIP
R3254	10K :CHIP	#	10K :CHIP
R3255	1.0M :CHIP	#	1.0M :CHIP
R3256	1.0M :CHIP	#	1.0M :CHIP
R3257	100K :CHIP	#	100K :CHIP
R3258	1.0M :CHIP	#	1.0M :CHIP
R3259	3.3K :CHIP	#	3.3K :CHIP
R3275	#	0 :CHIP	#
R3276	#	0 :CHIP	#
R6200	#	47K :CHIP	#
R6205	#	10K :CHIP	#
R6207	#	1.0K :CHIP	#
R6235	#	150 :CHIP	#
R6236	#	12K :CHIP	#
R6237	#	47K :CHIP	#
R6239	#	1.5K :CHIP	#
R6240	#	10K :CHIP	#
R6241	#	470 2W :RS	#
R6242	#	470 2W :RS	#
R6243	#	8.2	#
R6244	#	10K :CHIP	#
R6248	#	470 :CHIP	#
R6249	#	2.2K :CHIP	#
R6250	#	0 :CHIP	#
R6251	#	1.0K :CHIP	#
R6252	#	100K :CHIP	#
R6253	#	470 :CHIP	#
R6254	68 :CHIP	22 :CHIP	68 :CHIP
R6256	#	4.7K :CHIP	#
R6257	#	3.3K :CHIP	#
R6258	68 :CHIP	22 :CHIP	68 :CHIP
R6260	#	10K :CHIP	#
R6262	#	2.7K :CHIP	#
R6263	#	2.7K :CHIP	#
R6266	#	47K :CHIP	#
R6268	#	4.7K :CHIP	#

Note) The parts indicated as '#" in this circuit diagram are not listed here, as they are not used these models.

6-4. VOLTAGE LIST MEASUREMENT

A(1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC001	1	0
	2	4.9
	3	0.1
	4	0.1
	5	4.9
	6	4.9
	7	3.9
	8	4.8
	9	0.5
	10	4.8
	11	4.9
	12	0
	13	2.11
	14	2.1
	15	4.9
	16	4.9
	17	0
	18	<[4.8]>(0)
	19	2.4
	20	0.2
	21	4.9
	22	0
	23	4.9
	24	0.1
	25	4.8
	26	4.9
	27	4.8
	28	4.9
	29	4.9
	30	0
	31	0
	32	0
	33	4.9
	34	0
	35	0
	36	2.5
	37	2.5
	38	4.8
	39	4.9
	40	0
	41	0.1
	42	0
	43	0
	44	4.9
	45	4.9
	46	4.6
	47	4.9
	48	4.6
	49	0
	50	2.1
	51	0.1
	52	<[4.7]>(0.1)
IC002	1	0
	2	4.9
	3	4.8
	4	7.3
	5	4.9
	6	0
	7	0
IC003	1	0
	2	0
	3	0
	4	0
	5	4.9
	6	<[0]>(4.9)
	7	<[4.9]>(0)
	8	4.9
IC100	1	4.8
	2	4.8
	3	0
IC301	1	3.3
	2	5.1
	3	1.4
	4	5.1
	5	4.8
	6	4.4
	7	1.6
	8	3.8
	9	5.1
	10	3.8
	11	5.1
	12	0
	13	3.9
	14	2.3
	15	3.5
	16	3.5
	17	5.4
	18	7.6
	19	<[0]>(0.8)
	20	3.6
	21	3.2
	22	3.8
	23	<[3.5]>(3.9)
	24	1.7
	25	1.8
	26	1.6
	27	0
	28	4.5
	29	4.5
	30	4.5
	31	8.8
	32	4.1
	33	4.1
	34	3.6
	35	8.8
	36	4.6
	37	4.6
	38	4.6
	39	4.7
	40	5.1
	41	5.1
	42	0
	43	5.1
	44	<[4.9]>(5.1)
	45	6.2
	46	5.1
	47	8.8
	48	<[2.1]>(0.2)
	49	<[5.2]>(4.2)
	50	0
	51	0
	52	1.7
IC302	1	1.6
	2	0
	3	1.6
	4	0
	5	<[1.4]>(1.7)
	6	<[0]>(4.9)
	7	<[4.7]>(0)
	8	0.6
	9	0
	10	1.1
	11	4.9
	12	4.8
	13	0
	14	1.4
	15	0
	16	0.9
IC502	1	1.3
	2	3.5
	3	1.9
	4	0
	5	2.9
	6	2.6
	7	<[0]>(6.4)
	8	8.9
IC503	1	1.6
	2	13.8
	3	-13.8
	4	-14.8
	5	<[0.5]>(0.3)
	6	13.1
	7	1.6
IC602	1	119.5
	2	135.3
	3	0
IC603	I	12.6
	G	0
	O	8.9
IC604	I	7.8
	G	0
	O	4.9
Q001	B	4.9
	C	0
	E	0.9
Q002	B	0
	C	4.9
	E	09
Q005	B	4.8
	C	0
	E	4.8
Q101	B	2.8
	C	8.9
	E	2.1
Q301	B	12.6
	C	0
	E	12.5
Q302	B	1.6
	C	8.1
	E	0.9
Q303	B	8.1
	C	1.7
	E	8.7
Q304	B	3.6
	C	0
	E	4.3
Q305	B	8.1
	C	2.1
	E	8.7
Q306	B	1.6
	C	8.1
	E	1.0
Q307	B	4.3
	C	8.7
	E	3.7
Q308	B	3.6
	C	0.5
	E	0.8

A(2/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q309	B	<[4.7]>(0)	Q317	B	4.1	Q601	B	-0.6
	C	<[0]>(4.7)		C	0		C	-0.4
	E	0		E	4.8		E	-0.6
Q310	B	<[2.1]>(0.2)	Q503	B	0	Q602	B	0
	C	4.8		C	3.6		C	16.7
	E	<[1.3]>(0)		E	0		E	0
Q311	B	0	Q505	D	21.8	Q603	B	16.7
	C	8.9		G	6.4		C	3.9
	E	0		S	0		E	16.7
Q312	B	<[4.8]>(5.1)	Q506	B	-0.6	Q604	B	134.1
	C	0		C	86.9		C	0
	E	<[6.2]>(6.6)		E	0		E	134.2
Q313	B	0	Q507	B	12.6	Q605	D	310.6
	C	12.5		C	0.1		G	32.1
	E	0		E	13.0		S	-0.6
Q314	B	0.5	Q509	B	0.6	Q606	B	-0.1
	C	0		C	0.1		C	0.2
	E	1.1		E	0		E	-0.6
Q315	B	0	Q511	B	-0.1	Q607	B	0.7
	C	2.9		C	<[124]>(100)		C	0
	E	0		E	0		E	0
Q316	B	4.1	Q600	B	0	Q608	B	0
	C	0		C	12.6		C	0.7
	E	4.7		E	0		E	0
						PH600	1	0.2
							2	4.9
							3	0
							4	16.7

B1 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
IC1502	1	3.1	Q1503	B	0.6	Q1515	B	0.6
	2	3.0		C	0.6		C	0.6
	3	3.2		E	0.6		E	0.6
	4	4.6	Q1505	B	0.6	Q1516	B	0.5
	5	4.6		C	0.8		C	0.5
	6	0		E	0		E	0.5
	7	0	Q1507	B	0.7	Q1520	B	0.5
	8	0		C	0.8		C	0.4
	9	8.1		E	0.7		E	0
	10	7.9	Q1509	B	0.8	Q1522	B	0.4
	11	7.9		C	0.8		C	0
	12	7.6		E	0		E	0.5
	13	7.6	Q1510	B	0.7	Q1523	B	0.4
	14	7.3		C	0.7		C	0
	15	7.6		E	0		E	0.5
	16	7.6	Q1511	B	0.7			
Q1501	B	2.5		C	0.7			
	C	2.4		E	0			
	E	2.4	Q1514	B	0.6			
Q1502	B	2.3		C	0.6			
	C	2.3		E	0.6			
	E	2.5						

B(1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC1401	1	3.8
	2	3.9
	3	3.8
	4	3.9
	5	3.8
	6	8.2
	7	3.8
	8	3.9
	9	3.8
	10	3.9
	11	3.8
	12	8.2
	13	3.8
	14	3.9
	15	3.8
	16	3.9
	17	3.8
	18	8.2
	19	4.6
	20	4.6
	21	0
	22	3.9
	23	3.8
	24	3.9
	25	3.8
	26	3.9
	27	3.8
	28	3.9
	29	3.8
	30	3.8
	31	3.9
	32	3.8
	33	3.8
	34	0
	35	3.8
	36	0
	37	3.8
	38	3.9
	39	3.9
	40	3.8
	41	3.8
	42	3.9
	43	3.7
	44	8.9
	45	3.8
	46	3.9
	47	3.8
	48	3.9
IC1402	1	4.8
	2	2.42
	3	2.4
	4	0
	5	2.4
	6	2.4
	7	4.8
	8	8.9
IC1404	I	12.5
	G	0
	O	8.9
IC3200	1	4.4
	2	4.4
	3	4.4
	4	0
	5	4.4
	6	4.4
	7	4.4
	8	8.9
IC3201	1	0.1
	2	0.1
	3	8.9
	4	4.5
	5	4.4
	6	4.4
	7	4.4
	8	0
	9	4.4
	10	4.4
	11	4.4
	12	4.4
	13	4.4
	14	4.4
	15	4.4
	16	4.1
IC3202	1	4.4
	2	4.4
	3	4.4
	4	0
	5	4.4
	6	4.4
	7	4.4
	8	8.8
IC3203	1	4.4
	2	4.4
	3	4.4
	4	4.4
	5	8.7
	6	0.2
	7	0
	8	0.2
	9	0.2
	10	0.2
	11	0.1
	12	0.1
	13	8.7
	14	8.9
IC3204	1	4.4
	2	4.4
	3	4.4
	4	0
	5	4.4
	6	4.4
	7	4.4
	8	8.9
IC3205	1	0.1
	2	0.1
	3	8.7
	4	0.3
	5	0.3
	6	0.3
	7	0.3
	8	0
	9	0.1
	10	2.2
	11	0
	12	0
	13	8.9
	14	4.6
	15	4.6
	16	8.9
IC3206	1	0
	2	0
	3	0(0.2)
	4	4.4
	5	4.4
	6	4.4
	7	4.4
	8	4.4
	9	4.4
	10	4.4
	11	4.4
	12	4.4
	13	0
	14	2.5
	15	8.9
	16	0.1
	17	4.5
	18	4.6
	19	2.5
	20	0
	21	4.4
	22	4.4
	23	4.4
	24	4.4
	25	4.4
	26	4.4
	27	4.4
	28	4.4
	29	4.4
	30	4.4
	31	<[3.9]>(3.3)
	32	4.4
IC6200	1	1.6
	2	0
	3	0
	4	0
	5	1.6
	6	8.7
	7	12.1
	8	0.8
	9	25.7
	10	0
Q1316	B	8.3
	C	4.1
	E	8.9
Q1317	B	4.1
	C	8.9
	E	3.4
Q1318	B	4.3
	C	6.2
	E	3.6
Q1323	B	2.6
	C	8.3
	E	1.9
Q1324	B	6.2
	C	8.9
	E	5.5
Q1365	D	0
	F	0
	C	4.3
Q1372	B	3.6
	C	6.2
	E	2.9
Q1402	B	3.8
	C	0
	E	4.9
Q1403	B	3.7
	C	8.9
	E	3.0

B(2/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q1404	B C E	3.8 8.9 3.1	Q3204	D G S	4.3 3.9 4.3
Q1408	B C E	5.8 8.9 5.2	Q6201	B C E	4.1 0 0
Q1409	B C E	2.4 5.8 1.7	Q6203	B C E	4.1 0 0
Q3201	D G S	4.2 4.0 4.3	Q6204	B C E	4.1 0 0
Q3202	B C E	<[0]>(3.9) 8.7 3.3	Q6208	B C E	0 8.7 0
Q3203	B C E	3.9 8.7 3.3			

VM1 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q5901	B C E	2.7 8.9 2.0	Q5906	B C E	0.4 81.3 0.1
Q5902	B C E	135.2 81.2 135.2	Q5907	B C E	0 0.2 0
Q5903	B C E	2.7 4.6 2.0	Q5908	B C E	3.4 0 0
Q5904	B C E	4.6 0 5.1	Q5909	B C E	0 8.9 3.4
Q5905	B C E	5.6 8.9 5.1			

H BOARD VOLTAGE LIST

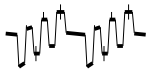
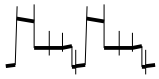
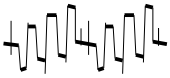
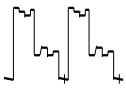
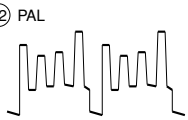
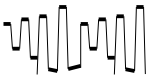
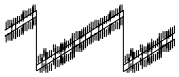
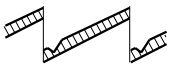
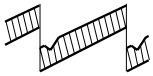
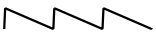
Ref	Pin No	Voltage[v]
IC3901	1 2 3	4.9 4.9 0
Q3901	B C E	0.1 4.9 0.1
Q3902	B C E	4.7 2.2 1.8

C6 BOARD VOLTAGE LIST

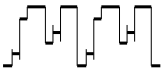
Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
IC1800	1 2 3 4 5 6 7 8 9 10	6.4 6.4 6.4 6.4 0 6.4 6.4 6.3 6.3 12.7	Q704	B C E	8.9 [(155)]<149> 8.4	Q712	B C E	1.7 8.4 1.3
J701	KR KG KB H2 G2	[153]<(145)> [149]<(146)> [(156)]<149> <[0]>(-0.7) [(313)]<310>	Q705	B C E	8.9 [(149)]<144> 8.4	Q714	B C E	0.7 0.2 4.8
Q701	B C E	[(154)]<150> 204 [(157)]<151>	Q706	B C E	8.2 [(151)]<146> [(7.7)](8.3)	Q714	B C E	0.7 0.2 0
Q702	B C E	[(149)]<144> 205 [(150)]<144>	Q707	B C E	[(156)]<150> <[4.4]>(5.2) [(154)]<149>	Q1800	B C E	3.8 0 4.5
Q703	B C E	[(151)]<146> 204 [(152)]<147>	Q708	B C E	[(149)]<144> [(5.6)]<6.0> [(147)]<142>	Q1802	B C E	0.4 3.4 0
			Q709	B C E	[(152)]<147> 4.9 [(150)]<144>	Q1803	B C E	0 6.4 0
			Q710	B C E	[(8.4)]<1.7> 8.4(8.9) 1.2			
			Q711	B C E	1.8 8.4 1.4			

6-5. WAVEFORMS

A BOARD WAVEFORMS

① 4.9Vp-p (V)	② 1.8Vp-p (V)	③ 1.8Vp-p (V)	④  1.0Vp-p (H)	⑤  0.7Vp-p (V)
⑥ 0.8Vp-p (H)	⑦  0.9Vp-p (H)	⑧ PAL/SECAM PAL : 0.6Vp-p (H) SECAM : 0.8Vp-p (H)	⑧ NTSC 0.7Vp-p (H)	⑨ 0.7Vp-p (H)
⑩ PAL/SECAM : 3.6Vp-p (H) NTSC : 3.9Vp-p (H)	⑪ PAL  3.5Vp-p (H)	⑪ SECAM 3.5Vp-p (H)	⑪ NTSC 3.5Vp-p (H)	⑫ PAL  3.6Vp-p (H)
⑫ SECAM 4.1Vp-p (H)	⑫ NTSC  3.7Vp-p (H)	⑬ PAL  1.3Vp-p (H)	⑬ SECAM  1.3Vp-p (H)	⑬ NTSC  1.3Vp-p (H)
⑭ 134Vp-p	⑮ 924Vp-p (H)	⑯  2.0Vp-p (V)		

C6 BOARD WAVEFORMS

① PAL 122Vp-p (H)	① SECAM 125Vp-p (H)	① NTSC  140Vp-p (H)
② PAL/SECAM PAL : 122Vp-p (H) SECAM : 118Vp-p (H)	② NTSC 113Vp-p (H)	③ PAL/NTSC PAL : 135Vp-p (H) NTSC : 126Vp-p (H)
③ SECAM 115Vp-p (H)	④ PAL/NTSC : 23.1Vp-p (H) SECAM : 22.8Vp-p (H)	

MEMO

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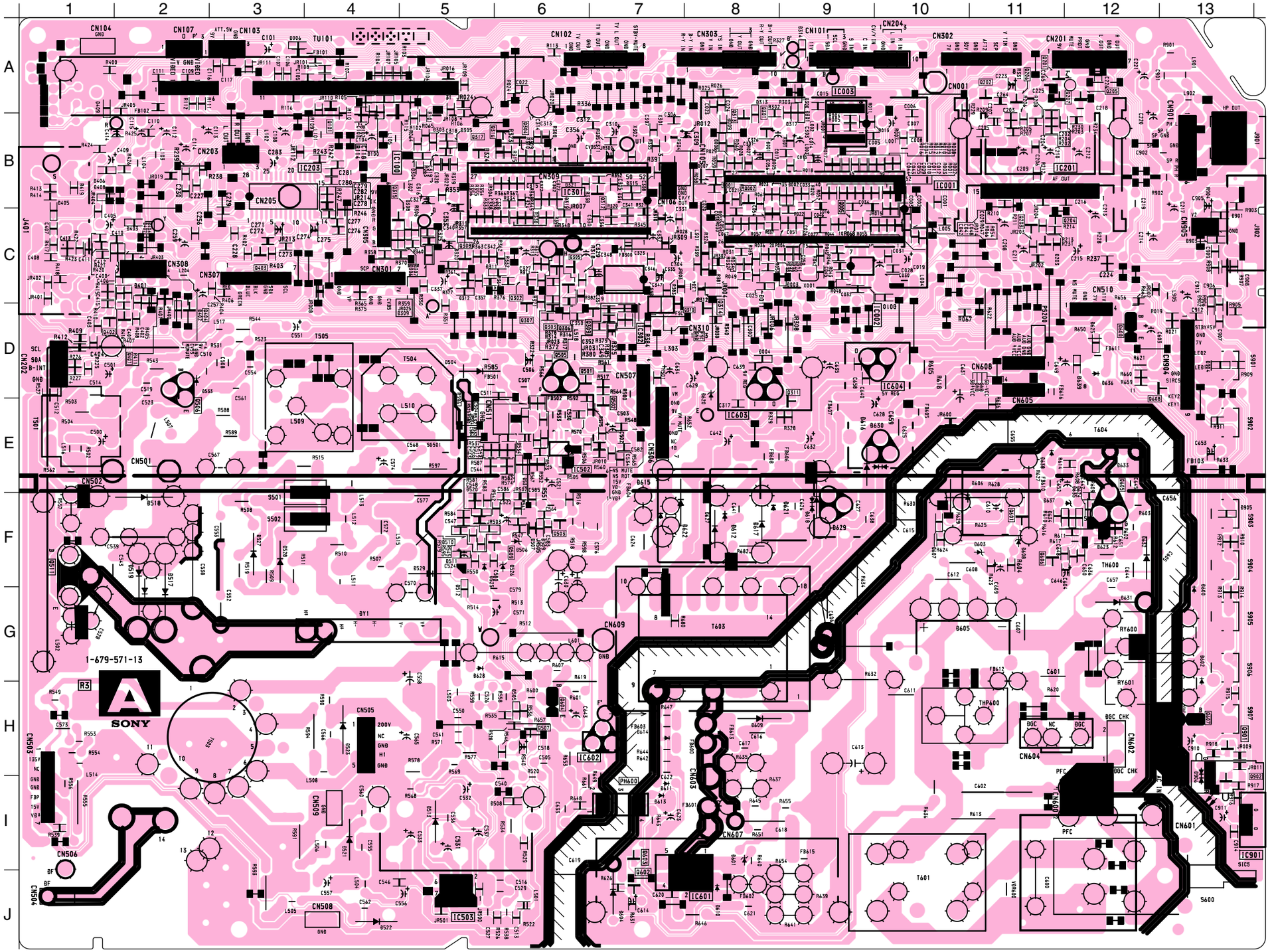
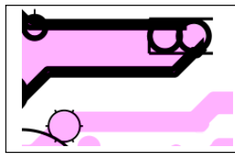
6-6. PRINTED WIRING BOARDS AND PARTS LOCATION

PRINTING WIRING BOARD

A [SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION, TUVIF, FRONT AMP, POWER SUPPLY]

– A Board –





NOTE:
The circuit indicated at left contains high voltage of over 1220 Vp-p. Please pay attention when inspecting or repairing it to prevent an electric shock.

A BOARD

IC

IC001	B-10
IC002	D-10
IC003	A-9
IC100	B-4
IC201	B-12
IC203	B-4
IC301	B-6
IC302	D-7
IC502	E-6
IC503	J-5
IC601	J-8
IC602	H-7
IC603	E-8
IC604	D-10
IC901	I-13

TRANSISTOR

Q001	B-8
Q002	B-8
Q005	B-9
Q101	B-4
Q201	A-11
Q202	A-11
Q203	C-11
Q204	C-12
Q205	A-12
Q206	A-11
Q207	A-12
Q301	A-8
Q302	C-6
Q303	D-6
Q304	B-6
Q305	C-6
Q306	D-6
Q307	D-6
Q308	C-5
Q309	D-7
Q310	D-8
Q311	D-9
Q312	B-7
Q313	B-8
Q314	D-8
Q315	B-4
Q316	B-5
Q317	B-5
Q401	D-2
Q402	D-1
Q403	C-3
Q404	D-2
Q501	D-6
Q502	E-7
Q503	F-6
Q505	D-6
Q506	E-2
Q507	H-6
Q509	F-6
Q511	F-1
Q600	D-12
Q601	F-11
Q602	J-7
Q603	I-7
Q604	H-6
Q605	E-12
Q606	F-11
Q607	H-13
Q608	D-12
Q901	H-13
Q902	H-13

DIODE

D001	B-8
D002	B-9
D003	C-9
D004	D-8
D005	B-8
D006	A-3
D007	B-8
D008	B-8
D009	B-8
D100	B-4
D203	C-11
D300	A-9
D301	B-9
D303	B-5
D304	B-5
D305	B-5
D306	C-5
D307	C-5
D308	B-5
D309	D-5
D312	C-5
D313	A-8
D314	A-9
D315	B-7
D317	B-9
D319	B-6
D320	C-5
D321	B-6
D322	B-6
D401	C-2
D402	D-2
D403	C-2
D404	C-2
D405	B-1
D406	B-1
D407	C-2
D408	B-1
D409	A-1
D504	D-5
D505	H-6
D506	F-6
D507	F-6
D508	I-6
D509	F-6
D510	F-5
D511	F-5
D512	G-5
D513	I-5
D517	F-2
D518	F-2
D519	F-2
D520	E-5
D521	I-4
D522	J-4
D523	H-4
D525	F-5
D526	F-6
D527	F-3
D528	F-3
D529	F-5
D531	E-6
D533	D-2
D534	E-6
D600	F-13
D601	I-8
D602	G-13
D603	F-11
D604	J-7
D605	G-10
D606	E-11
D607	F-10
D608	F-11
D609	H-8
D610	J-8
D611	I-7
D612	F-8
D613	I-7
D615	E-7
D616	E-9
D617	F-8
D618	F-9
D620	D-8
D621	F-9
D622	F-8
D623	F-12
D624	E-12
D625	E-12
D627	F-8
D628	G-5
D629	F-9
D630	E-10
D631	G-12
D632	F-12
D633	E-12
D634	F-11
D635	F-12
D636	D-12
D637	F-11
D638	E-11
D639	D-12
D901	C-13
D902	C-13
D903	C-13
D904	D-13
D905	F-13
D906	H-13

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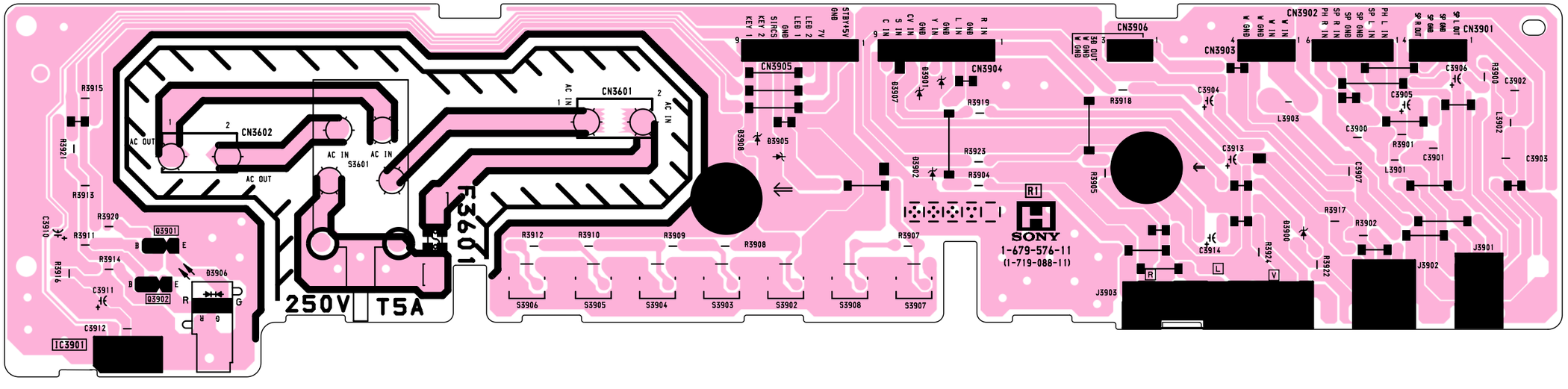
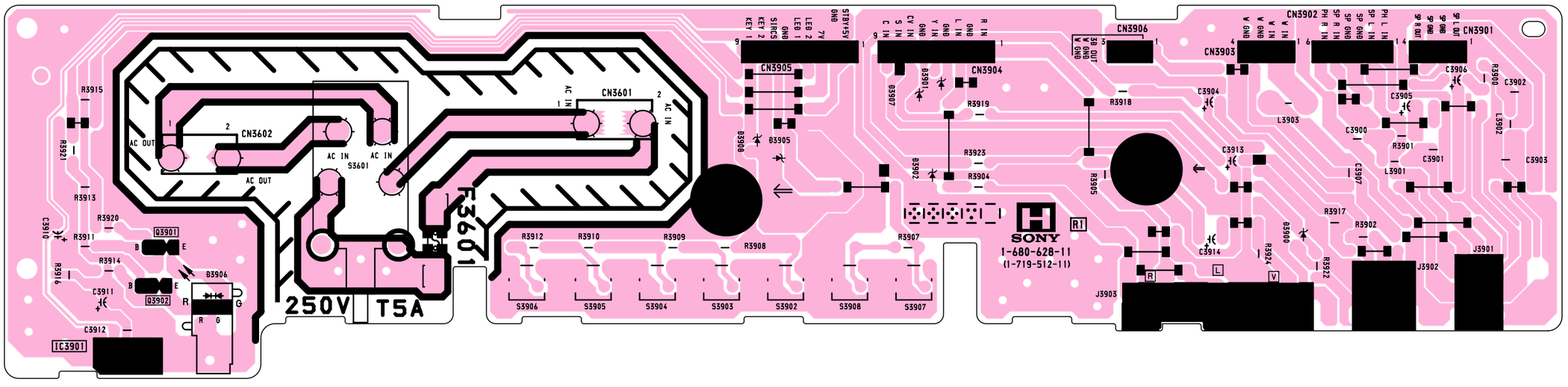
PRINTING WIRING BOARD

H [FRONT AV IN, SENSOR, POWER SWITCH]

– H Board – (KV-XA25M83)



– H Board – (KV-XA25M80/N90)



KV-XA25M80/XA25M83/XA25N90
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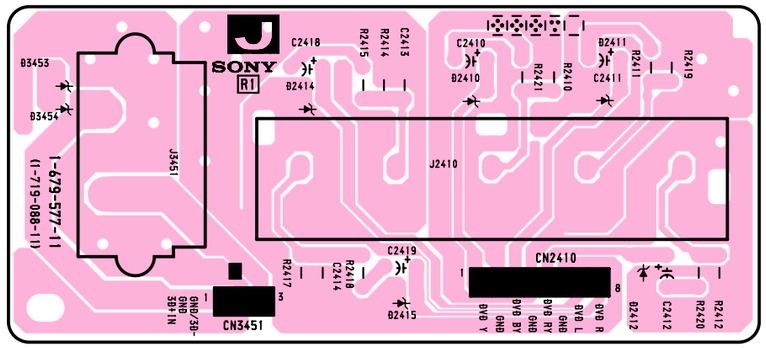
PRINTING WIRING BOARD

B [AUDIO PROCESSOR, AUDIO AMP, SUB TUNER, AV IN/OUT, VM DRIVER]

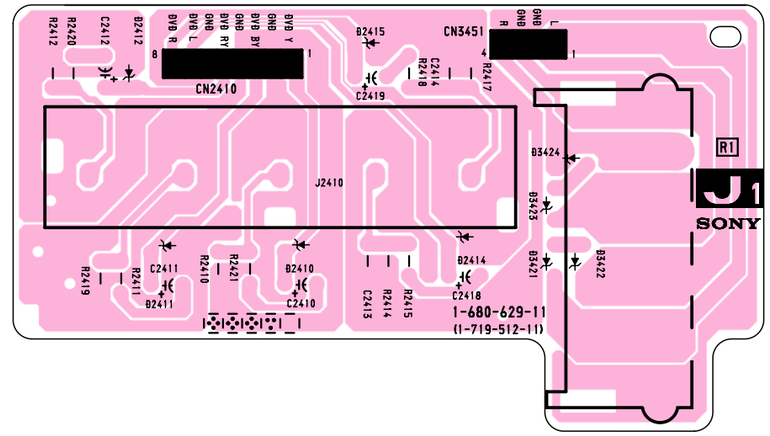
J1 [DVD, 3D TERMINAL]

J [DVD, 3D TERMINAL]

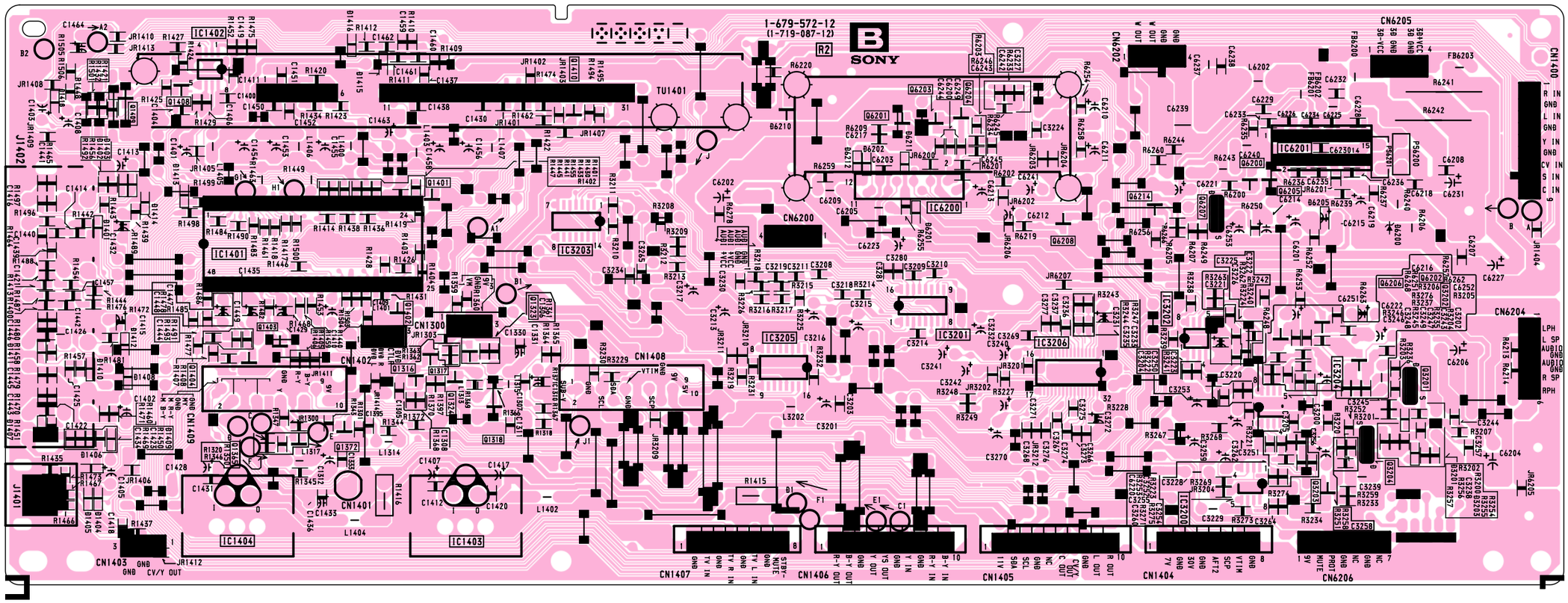
– J Board – (KV-XA25M83)



– J1 Board – (KV-XA25M80/XA25N90)



– B Board –



KV-XA25M80/XA25M83/XA25N90
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PRINTED WIRING BOARD

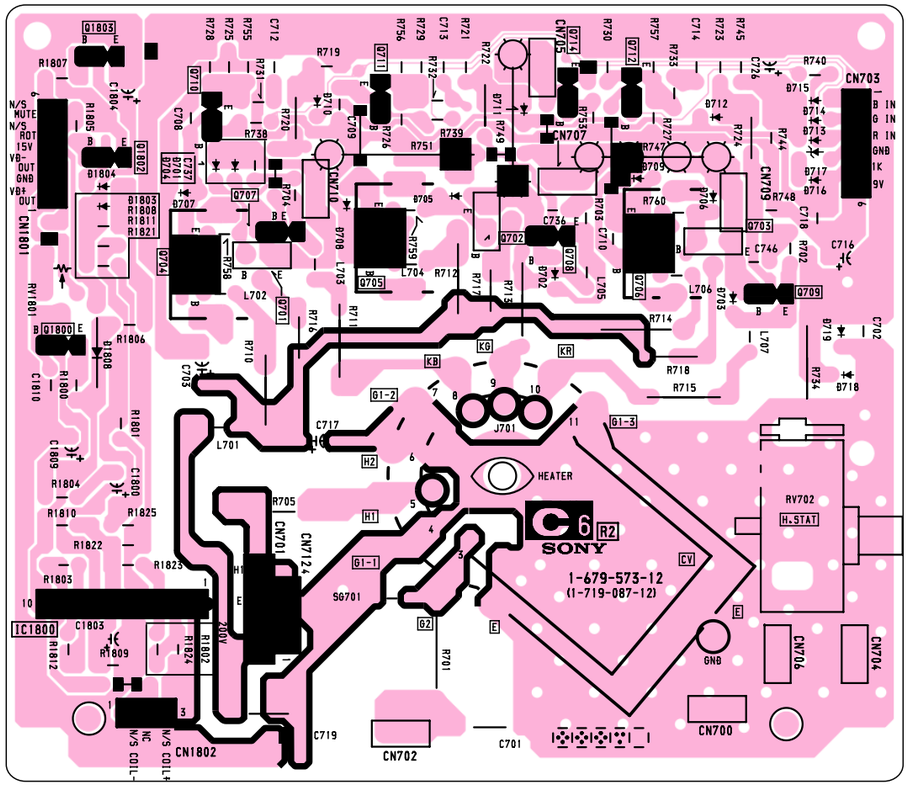
C6 [VIDEO AMP, ROTATION CIRCUIT]

VM1 [VELOCITY MODULATION]

F [CISPR]

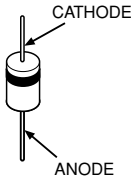
B1 [DVD SWITCH]

– C6 Board –

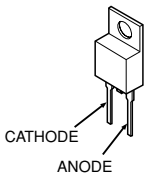


6-7 SEMICONDUCTORS

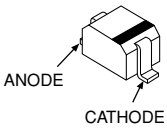
DIODE



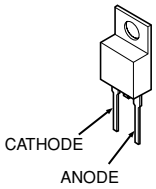
AU-01Z-V1 EL1Z ERA22-08 ERC06-15S ERC04-06SE GP08D NNCD9.1A-T1	HSS83TD RD33EB3T RGP02-17EL-6433 RU4AM-T4 10ELS2N-TB5



DTZ10B DTZ-TT11-15B MA111-(TX) RD7.5SB1-T1 RD9.1S-B 1SS355TE-17 UDZS-TE17-5.1B UDZS-TE17-9.1B

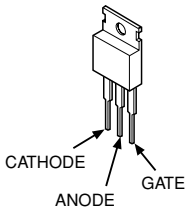


D1N20R D1NS4 RD6.8ES-B1 RD20ES-B2 RD30ES-B2 RD39ES-B2	RD5.1ES-B3 1SS119-25 HZS9.1NB2

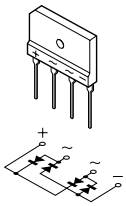


D5S6M

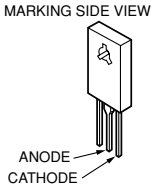
LED



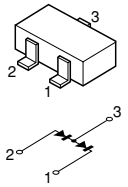
5P-6M



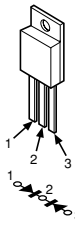
D3SB60



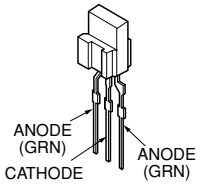
D5LC20U



DA204K

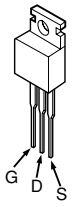


FMX-12S FMU-G26S

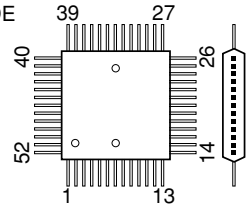


SPB-26MVWF

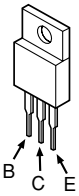
TRANSISTOR



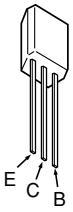
IRF614



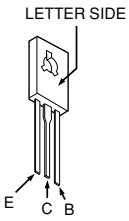
RU-1P



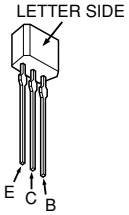
2SA1606-E 2SC4159-E



2SA1091-0 2SC3576 2SC2458-YGR 2SC2551-0 2SD2144S-UVW



2SC2611



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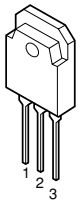

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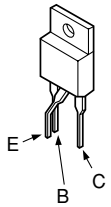

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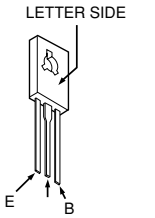

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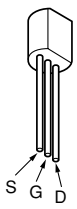

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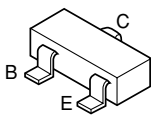

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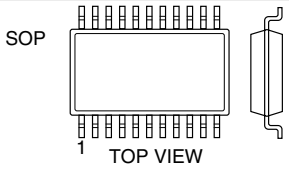
<td colspan="2"> 

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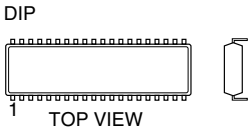
<td colspan="2"> 

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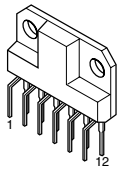
<td> 
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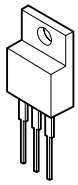
<td>  </td>
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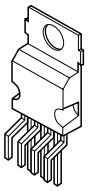
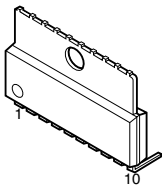
<td>  </td>
<td> 
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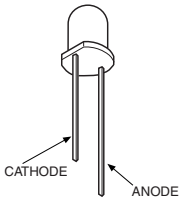
<td> 
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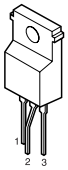
<td> 
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 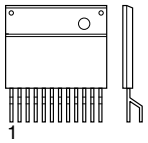

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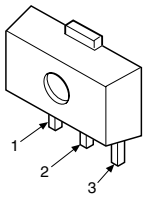
<td> 
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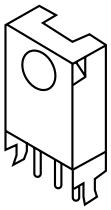
<td>  </td>
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 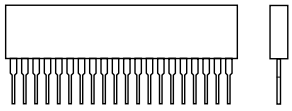
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SECTION 7
EXPLODED VIEWS

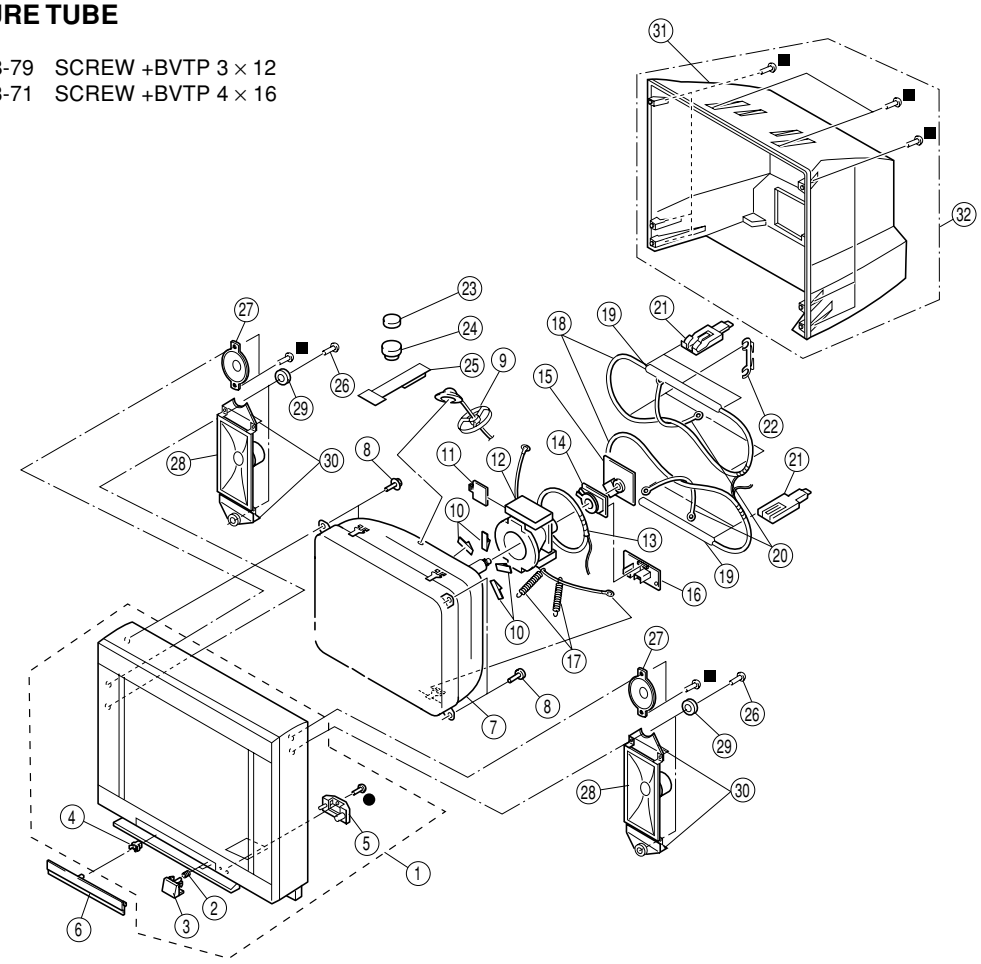
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. PICTURE TUBE

● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-4038-690-3	BEZNET ASSY (except KV-XA25N90)	2 ~ 5
		X-4038-748-1	BEZNET ASSY (KV-XA25N90)	2 ~ 5
2		4-036-405-11	SPRING, COMPRESSION	
3		4-075-747-01	BUTTON, POWER	
4		4-047-464-01	CATCHER, PUSH	
5	*	4-075-749-01	GUIDE, LIGHT	
6		4-078-944-21	CONTROL, DOOR (KV-XA25M80)	
		4-080-703-41	CONTROL, DOOR (KV-XA25M83)	
		4-078-944-71	CONTROL, DOOR (KV-XA25N90)	
7	⚠	8-733-250-05	PICTURE TUBE (A60LPN70X)	
8		4-046-765-12	SCREW, TAPPING 7 + CROWN WASHER	
9	*	3-704-372-81	HOLDER, HV CABLE (KV-XA25M80/M83)	
	*	3-704-372-11	HOLDER, HV CABLE (KV-XA25N90)	
10		4-046-600-11	SPACER, DY (KV-XA25M80/M83)	
		3-703-961-01	SPACER, DY (KV-XA25N90)	
11		4-057-714-01	PIECE, TLH CONVERGENCE	
12	⚠	1-451-475-11	DEFLECTION YOKE (Y25RSA)	
13		1-452-896-61	COIL, NA ROTATION (RT200)	
14		8-453-011-21	NA299-S	
15	*	A-1332-177-A	C6 BOARD MOUNTED (KV-XA25M80/M83)	
	*	A-1332-147-A	C6 BOARD MOUNTED (KV-XA25N90)	

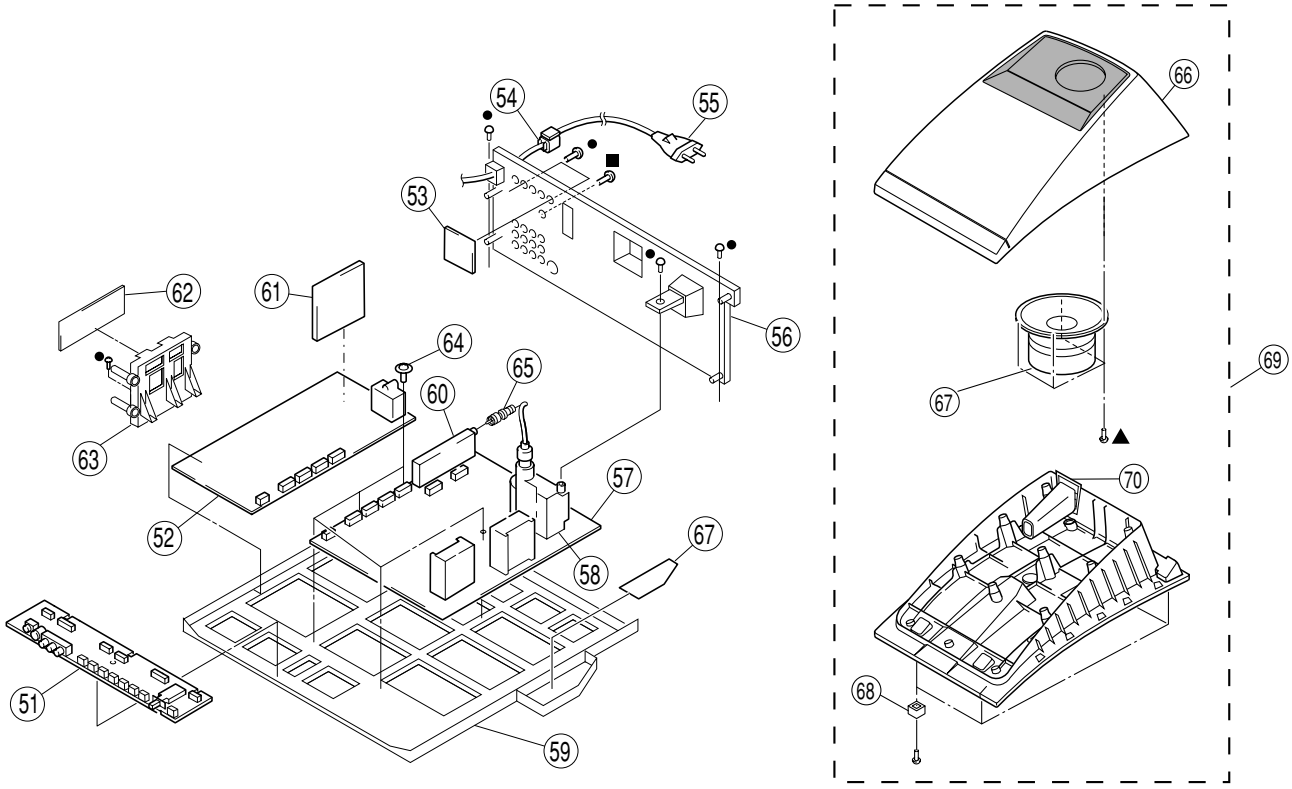
REF. NO.		PART NO.	DESCRIPTION	REMARK
16	*	A-1342-610-A	VM1 BOARD MOUNTED (KV-XA25M80/M83)	
	*	A-1342-590-A	VM1 BOARD MOUNTED (KV-XA25N90)	
17		4-078-765-01	SPRING, EXTENSION (KV-XA25M80/M83)	
		4-369-318-61	SPRING, TENSION (KV-XA25N90)	
18	⚠	1-419-322-11	COIL, DEGAUSSING	
19	*	4-063-935-21	CUSHION (50 x 550), DGC	
20		4-079-376-01	BAND, DGC	
21	*	4-065-572-01	CLIP (25 RSN), DGC	
22		4-064-883-03	HOLDER, DGC	
23		1-452-032-00	MAGNET, DISC	
24		1-452-094-00	CIRCULAR DISC MAGNET B	
25		X-4387-214-3	PERMALOY ASSY, CORRECTION	
26		4-302-404-03	SCREW (WASHER HEAD) (+P 4 x 16)	
27		1-529-190-11	SPEAKER (5 CM)	
28		1-529-246-21	SPEAKER (15 x 6.5 CM) (KV-XA25M80/M83)	
		1-503-902-11	SPEAKER (15 x 6.5CM) (KV-XA25N90)	
29		4-374-745-21	CUSHION A	
30	*	4-046-981-01	BRACKET, SPEAKER	
31		4-080-624-01	COVER REAR (■ 11)	
32		X-4038-947-1	REAR COVER ASSY	

7-2. CHASSIS

● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16

7-3. 3D SPEAKER (KV-XA25M83 ONLY)

▲ : 7-685-661-14 SCREW +BVTP 4 × 12



REF. NO.		PART NO.	DESCRIPTION	REMARK
51	*	A-1372-972-A	H BOARD MOUNTED (KV-XA25M80)	
	*	A-1372-988-A	H BOARD MOUNTED (KV-XA25M83)	
	*	A-1372-915-A	H BOARD MOUNTED (KV-XA25N90)	
52	*	A-1136-201-A	B BOARD MOUNTED (KV-XA25M80)	
	*	A-1136-207-A	B BOARD MOUNTED (KV-XA25M83)	
	*	A-1136-160-A	B BOARD MOUNTED (KV-XA25N90)	
53	*	A-1388-316-A	J1 BOARD MOUNTED (KV-XA25M80)	
	*	A-1388-321-A	J BOARD MOUNTED (KV-XA25M83)	
	*	A-1388-301-A	J1 BOARD MOUNTED (KV-XA25N90)	
54	⚠	4-022-115-00	HOLDER, AC CORD	
55	⚠	1-575-023-11	CORD, POWER (WITH CONNECTOR) (KV-XA25N90)	
	⚠	1-574-062-11	CORD, POWER (WITH CONNECTOR) (KV-XA25M80/M83)	
56	*	4-081-023-01	BRACKET, TERMINAL (■ 1) (KV-XA25M80/M83)	
	*	4-081-023-21	BRACKET, TERMINAL (■ 1) (KV-XA25N90)	
57	*	A-1299-493-A	A BOARD COMPLETE (KV-XA25M80)	
	*	A-1299-511-A	A BOARD COMPLETE (KV-XA25M83)	
	*	A-1299-541-A	A BOARD COMPLETE (KV-XA25N90)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
58	⚠	1-453-357-21	TRANSFORMER ASSY, FLYBACK (NX-4009//M3B4) (KV-XA25M80/M83)	
	⚠	1-453-288-11	TRANSFORMER ASSY, FLYBACK (NX4009//C6I4) (KV0XA25N90)	
59	*	4-066-681-05	BRACKET, MAIN 7 SCREWS (3X12), (+BVTAP)	
60		8-598-449-10	TUNER, FSS BTF-LG433 (KV-XA25M80/M83)	
		8-598-477-30	TUNER, FSS BTF-WG411 (KV-XA25N90)	
61	*	A-1131-685-A	B1 BOARD MOUNTED (KV-XA25M80/M83)	
	*	A-1131-652-A	B1 BOARD MOUNTED (KV-XA25N90)	
62	*	A-1241-484-A	F BOARD MOUNTED (KV-XA25M80/M83)	
	*	A-1241-452-A	F BOARD MOUNTED (KV-XA25N90)	
63	*	4-066-682-01	BRACKET, F PWB	
64		4-046-797-01	SCREW (3X12), (+)BVTAP	
65		1-573-657-21	PLUG F-PIN (KV-XA25N90)	
66	*	4-080-405-02	3D BOX, TOP (KV-XA25M83 only)	
67		1-544-906-11	SPEAKER (10 CM) (▲ 4 SCREWS) (KV-XA25M83 only)	
68	*	4-068-528-21	FOOT (KV-XA25M83 only)	
69		A-1501-889-A	3D BOX ASSY (▲ 11 SCREWS) (KV-XA25M83 only)	
70	*	4-080-406-02	DUCT SPEAKER (KV-XA25M83 only)	

SECTION 8
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : µF, PF : µµF

COILS
- MMH : mH, UH : µH

REF NO.	PART NO.	DESCRIPTION			REMARK
	* A-1299-493-A	A BOARD COMPLETE (KV-XA25M80)			
	* A-1299-511-A	A BOARD COMPLETE (KV-XA25M83)			
	* A-1299-541-A	A BOARD COMPLETE (KV-XA25N90)			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	4-382-854-21	SCREW (M3X14), P, SW (+)			
		<CAPACITOR>			
C004	1-163-001-11	CERAMIC CHIP	220PF	10.00%	50V
C005	1-163-001-11	CERAMIC CHIP	220PF	10.00%	50V
C006	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C007	1-104-660-91	ELECT	47UF	20.00%	16V
C013	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C014	1-104-664-11	ELECT	47UF	20.00%	25V
C015	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C016	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
C017	1-163-113-00	CERAMIC CHIP	68PF	5.00%	50V
C019	1-104-664-11	ELECT	47UF	20.00%	25V
C020	1-163-259-91	CERAMIC CHIP	220PF	5.00%	50V
C022	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C023	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C024	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C026	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C027	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C028	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C030	1-126-965-91	ELECT	22UF	20.00%	50V
C031	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C032	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C034	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C041	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C042	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C043	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C044	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C047	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C048	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C050	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C051	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C053	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C056	1-163-263-11	CERAMIC CHIP	330PF	5.00%	50V
C101	1-126-964-11	ELECT (KV-XA25N90 ONLY)	10UF	20.00%	50V
C103	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C104	1-104-665-11	ELECT	100UF	20.00%	10V
C106	1-163-035-00	CERAMIC CHIP (KV-XA25N90 ONLY)	0.047UF		50V
C107	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C108	1-104-660-91	ELECT	47UF	20.00%	16V
C109	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C110	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C111	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V

REF NO.	PART NO.	DESCRIPTION			REMARK
C112	1-104-660-91	ELECT	47UF	20.00%	16V
C113	1-104-664-11	ELECT	47UF	20.00%	25V
C114	1-126-967-11	ELECT	47UF	20.00%	50V
C118	1-110-501-11	CERAMIC CHIP	0.33UF	10.00%	16V
C300	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C301	1-126-935-11	ELECT	470UF	20.00%	16V
C302	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C303	1-126-959-11	ELECT	0.47UF	20.00%	50V
C304	1-126-967-11	ELECT	47UF	20.00%	50V
C305	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C306	1-163-233-91	CERAMIC CHIP	18PF	5.00%	50V
C307	1-163-233-91	CERAMIC CHIP	18PF	5.00%	50V
C308	1-163-259-91	CERAMIC CHIP	220PF	5.00%	50V
C309	1-137-378-11	MYLAR	0.22UF	5.00%	50V
C311	1-126-964-11	ELECT	10UF	20.00%	50V
C312	1-164-346-11	CERAMIC CHIP	1UF		16V
C313	1-164-346-11	CERAMIC CHIP	1UF		16V
C314	1-164-346-11	CERAMIC CHIP	1UF		16V
C315	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C316	1-126-934-11	ELECT	220UF	20.00%	16V
C317	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C318	1-163-031-91	CERAMIC CHIP	0.01UF		50V
C319	1-163-031-91	CERAMIC CHIP	0.01UF		50V
C320	1-163-031-91	CERAMIC CHIP	0.01UF		50V
C321	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C322	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C324	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C325	1-126-960-11	ELECT	1UF	20.00%	50V
C327	1-126-965-91	ELECT	22UF	20.00%	50V
C328	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C329	1-126-963-11	ELECT	4.7UF	20.00%	50V
C330	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C331	1-126-963-11	ELECT	4.7UF	20.00%	50V
C332	1-126-963-11	ELECT	4.7UF	20.00%	50V
C335	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C336	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C337	1-126-961-11	ELECT	2.2UF	20.00%	50V
C341	1-115-340-11	CERAMIC CHIP	0.22UF	10.00%	25V
C342	1-163-259-91	CERAMIC CHIP	220PF	5.00%	50V
C347	1-126-933-11	ELECT	100UF	20.00%	16V
C348	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C349	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C350	1-163-031-91	CERAMIC CHIP	0.01UF		50V
C351	1-126-964-11	ELECT	10UF	20.00%	50V
C352	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C353	1-126-960-11	ELECT	1UF	20.00%	50V
C356	1-104-660-91	ELECT	47UF	20.00%	16V
C357	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C502	1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C506	1-107-638-11	ELECT	33UF	20.00%	160V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.		PART NO.	DESCRIPTION		REMARK
C507		1-161-830-00	CERAMIC	0.0047UF	500V
C510		1-102-112-00	CERAMIC	330PF 10.00%	50V
C512		1-163-989-11	CERAMIC CHIP	0.033UF 10.00%	25V
C513		1-163-263-11	CERAMIC CHIP	330PF 5.00%	50V
C514		1-106-383-00	MYLAR	0.047UF 10.00%	200V
C517		1-164-182-11	CERAMIC CHIP	0.0033UF 10.00%	50V
C518		1-104-665-11	ELECT	100UF 20.00%	10V
C519		1-102-212-00	CERAMIC	820PF 10.00%	500V
C521		1-126-934-11	ELECT	220UF 20.00%	16V
C522		1-126-933-11	ELECT	100UF 20.00%	16V
C523		1-102-002-00	CERAMIC	680PF 10.00%	500V
C524		1-126-967-11	ELECT	47UF 20.00%	50V
C526		1-130-495-00	MYLAR	0.1UF 5.00%	50V
C527		1-102-820-00	CERAMIC	330PF 5.00%	50V
C528		1-161-754-00	CERAMIC	0.001UF 10.00%	2KV
C530		1-137-372-11	MYLAR	0.022UF 5.00%	50V
C531		1-107-903-11	ELECT	2.2UF 20.00%	50V
C532		1-126-941-11	ELECT	470UF 20.00%	25V
C533		1-126-941-11	ELECT	470UF 20.00%	25V
C534		1-164-004-11	CERAMIC CHIP	0.1UF 10.00%	25V
C536		1-136-165-00	FILM	0.1UF 5.00%	50V
C537		1-126-969-11	ELECT	220UF 20.00%	50V
C538		1-127-717-11	FILM	19000PF 3%	1.2KV
C539		1-130-959-91	FILM	0.047UF 5.00%	400V
C540		1-136-171-00	FILM	0.33UF 5.00%	50V
C544		8-719-404-50	MA111-TX		
C546		1-165-319-11	CERAMIC CHIP	0.1UF	50V
C548		1-163-243-11	CERAMIC CHIP	47PF 5.00%	50V
C549		1-163-017-00	CERAMIC CHIP	0.0047UF 10.00%	50V
C550		1-106-220-00	MYLAR	0.1UF 10.00%	100V
C551		1-126-960-11	ELECT	1UF 20.00%	50V
C552		1-162-116-00	CERAMIC	680PF 10.00%	2KV
C553		1-162-116-00	CERAMIC	680PF 10.00%	2KV
C554		1-107-364-11	MYLAR	0.01UF 10.00%	200V
C556		1-126-941-11	ELECT	470UF 20.00%	25V
C557		1-126-941-11	ELECT	470UF 20.00%	25V
C558		1-123-024-21	ELECT	33UF	160V
C560		1-102-228-00	CERAMIC	470PF 10.00%	500V
C561		1-129-708-91	FILM	0.0033UF 5.00%	630V
C562		1-102-228-00	CERAMIC	470PF 10.00%	500V
C564		1-163-038-91	CERAMIC CHIP	0.1UF	25V
C565		1-107-655-11	ELECT	47UF 20.00%	250V
C566		1-102-244-00	CERAMIC	220PF 10.00%	500V
C567		1-115-520-11	FILM	0.68UF 5.00%	250V
C568		1-102-228-00	CERAMIC	470PF 10.00%	500V
C570		1-115-521-11	FILM	0.82UF 5.00%	250V
C572		1-107-846-11	FILM	0.1UF 5.00%	250V
C573		1-106-379-12	MYLAR	0.033UF 10.00%	200V
C574		1-107-636-11	ELECT	10UF 20.00%	160V
C576		1-130-495-00	MYLAR	0.1UF 5.00%	50V
C577		1-106-395-00	MYLAR	0.15UF 10.00%	200V
C582		1-164-004-11	CERAMIC CHIP	0.1UF 10.00%	25V
C586		1-216-295-91	SHORT	0	
C600	⚠	1-104-705-11	MYLAR	0.1UF 20.00%	250V
C601		1-129-720-00	FILM	0.033UF 5.00%	630V
C602	⚠	1-104-705-11	MYLAR	0.1UF 20.00%	250V
C603		1-104-664-11	ELECT	47UF 20.00%	25V
C604		1-163-009-91	CERAMIC CHIP	0.001UF 10.00%	50V
C605	⚠	1-119-886-51	CERAMIC	470PF 10.00%	250V
C606	⚠	1-119-886-51	CERAMIC	470PF 10.00%	250V

REF NO.		PART NO.	DESCRIPTION		REMARK
C607		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C608		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C609		1-126-968-11	ELECT	100UF 20.00%	50V
C610		1-126-964-11	ELECT	10UF 20.00%	50V
C611		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C612		1-161-830-00	CERAMIC	0.0047UF 99%	500V
C613		1-125-906-11	ELECT	560UF 20.00%	450V
C614		1-126-964-11	ELECT	10UF 20.00%	50V
C615	⚠	1-119-886-51	CERAMIC	470PF 10.00%	250V
C616		1-130-202-00	FILM	0.022UF 5.00%	400V
C617		1-107-792-11	CERAMIC	100PF 5.00%	1KV
C618		1-125-893-11	FILM	680PF 3.00%	1.5KV
C619	⚠	1-119-886-51	CERAMIC	470PF 10.00%	250V
C620		1-163-133-00	CERAMIC CHIP	470PF 5.00%	50V
C621		1-102-114-00	CERAMIC	470PF 10.00%	50V
C622		1-102-119-00	CERAMIC (KV-XA25M80/XA25M83)	0.0015UF 10.00%	50V
C622		1-102-074-00	CERAMIC (KV-XA25N90)	0.001UF 10.00%	50V
C623		1-104-665-11	ELECT	100UF 20.00%	25V
C624		1-104-331-11	CERAMIC	0.0022UF 10.00%	1KV
C626		1-102-002-00	CERAMIC	680PF 10.00%	500V
C627		1-102-002-00	CERAMIC (KV-XA25M83 ONLY)	680PF 10.00%	500V
C628		1-126-952-11	ELECT (KV-XA25M83 ONLY)	1000UF 20.00%	35V
C629		1-126-964-11	ELECT	10UF 20.00%	50V
C630		1-125-494-11	ELECT(BLOCK)	560UF 20.00%	160V
C631		1-128-550-11	ELECT	2200UF 20.00%	50V
C632		1-128-339-11	ELECT	2200UF 20.00%	16V
C633		1-104-999-11	MYLAR	0.1UF 10.00%	200V
C634		1-126-933-11	ELECT	100UF 20.00%	16V
C635		1-104-665-11	ELECT	100UF 20.00%	10V
C636		1-104-760-11	CERAMIC CHIP	0.047UF 10.00%	50V
C638		1-161-830-00	CERAMIC (KV-XA25M83 ONLY)	0.0047UF	500V
C641		1-102-002-00	CERAMIC	680PF 10.00%	500V
C642		1-126-943-11	ELECT	2200UF 20.00%	25V
C643		1-104-665-11	ELECT	100UF 20.00%	10V
C644		1-104-331-11	CERAMIC	0.0022UF 10.00%	1KV
C645		1-137-605-11	MYLAR	0.01UF 10.00%	250V
C646		1-107-679-91	ELECT	10UF 20.00%	450V
C647		1-163-275-11	CERAMIC CHIP	0.001UF 5.00%	50V
C649		1-126-940-11	ELECT	330UF 20.00%	25V
C650		1-163-275-11	CERAMIC CHIP	0.001UF 5.00%	50V
C651		1-163-133-00	CERAMIC CHIP	470PF 5.00%	50V
C652		1-126-965-91	ELECT	22UF 20.00%	50V
C653		1-104-664-11	ELECT	47UF 20.00%	25V
C655	⚠	1-119-886-51	CERAMIC	470PF 10.00%	250V
C657		1-101-821-00	CERAMIC	0.0022UF	500V
C659		1-162-116-00	CERAMIC	680PF 10.00%	2KV
C912		1-164-004-11	CERAMIC CHIP	0.1UF 10.00%	25V
C913		1-104-665-11	ELECT	100UF 20.00%	10V

<CONNECTOR>

CN101	*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P
CN102	*	1-779-889-11	CONNECTOR, BOARD TO BOARD 8P
CN104		1-695-915-11	TAB (CONTACT)
CN105		1-695-915-11	TAB (CONTACT)
CN106	*	1-564-506-11	PLUG, CONNECTOR 3P

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REF NO.		PART NO.	DESCRIPTION	REMARK
CN201	*	1-564-508-11	PLUG, CONNECTOR 5P	
CN202	*	1-785-608-11	PIN, CONNECTOR 4P	
CN303	*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P	
CN305	*	1-564-509-11	PLUG, CONNECTOR 6P	
CN306		1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M80/XA25M83 ONLY)	
CN501	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN502	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN505	*	1-564-508-11	PLUG, CONNECTOR 5P	
CN506		4-352-844-01	PIN, LEAD, COATING	
CN507	*	1-564-509-11	PLUG, CONNECTOR 6P	
CN508		1-695-915-11	TAB (CONTACT)	
CN601		1-580-843-11	PIN, CONNECTOR (POWER)	
CN602	*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN603	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN604	*	1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
CN605	*	1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M83 ONLY)	
CN608		1-564-507-41	PLUG, CONNECTOR 4P	
CN904	*	1-564-512-11	PLUG, CONNECTOR 9P	
			<DIODE>	
D001		8-719-988-61	1SS355TE-17	
D002		8-719-988-61	1SS355TE-17	
D004		1-216-295-91	SHORT 0	
D005		8-719-988-61	1SS355TE-17	
D006		8-719-988-61	1SS355TE-17	
D007		8-719-988-61	1SS355TE-17	
D008		8-719-988-61	1SS355TE-17	
D009		8-719-988-61	1SS355TE-17	
D100		8-719-404-50	MA111-TX (KV-XA25M80/XA25M83)	
D300		1-216-295-91	SHORT 0	
D301		8-719-988-61	1SS355TE-17	
D306		8-719-988-61	1SS355TE-17	
D307		8-719-988-61	1SS355TE-17	
D308		8-719-988-61	1SS355TE-17	
D309		8-719-069-54	UDZSTE-175.1B	
D311		8-719-988-61	1SS355TE-17	
D312		8-719-988-61	1SS355TE-17	
D313		8-719-988-61	1SS355TE-17	
D315		8-719-988-61	1SS355TE-17	
D316		8-719-037-06	RD7.5SB1-T1	
D320		8-719-069-60	UDZSTE-179.1B	
D321		8-719-069-60	UDZSTE-179.1B	
D504		8-719-302-43	EL1Z	
D505		8-719-988-61	1SS355TE-17	
D506		8-719-911-19	1SS119-25	
D507		8-719-988-61	1SS355TE-17	
D508		8-719-988-61	1SS355TE-17	
D509		1-216-073-91	RES-CHIP 10K 5% 1/10W	
D510		8-719-988-61	1SS355TE-17	
D511		8-719-988-61	1SS355TE-17	
D512		8-719-988-61	1SS355TE-17	
D513		8-719-908-03	GP08D	
D517		8-719-945-80	ERC06-15S	
D518		8-719-074-35	RU4AM-T4	
D519		8-719-945-80	ERC06-15S	
D520		8-719-404-50	MA111-TX	
D521		8-719-302-43	EL1Z	
D522		8-719-302-43	EL1Z	
D523		8-719-302-43	EL1Z	
D527		8-719-908-03	GP08D	
D528		8-719-908-03	GP08D	
D531		8-719-988-61	1SS355TE-17	
D532		8-719-988-61	1SS355TE-17	
D534		1-216-295-91	SHORT 0	
D600		8-719-911-19	1SS119-25	
D602		8-719-911-19	1SS119-25	
D603		8-719-150-92	RD33EB3T	
D604		8-719-028-72	RGP02-17EL-6433	
D605		8-719-510-22	D3SB60	
D606		8-719-108-18	5P-6M	
D607		8-719-404-50	MA111-TX	
D608		8-719-110-53	RD20ES-B2	
D609		8-719-311-31	RU-1P	
D610		8-719-043-76	AK04V0	
D611		8-719-075-73	10ELS2N-TB5	
D612		8-719-071-38	D5S6M (KV-XA25M80/XA25M83)	
D613		8-719-075-73	10ELS2N-TB5	
D614		8-719-075-73	10ELS2N-TB5	
D617		8-719-083-56	30DF2N-FC5 (KV-XA25N90 ONLY)	
D620		8-719-110-72	RD30ESB2	
D621		8-719-071-38	D5S6M (KV-XA25M80/XA25M83)	
D622		8-719-177-49		
D623		8-719-978-65	DTZ-TT11-15B	
D624		8-719-404-50	MA111-TX	
D625		8-719-977-28	DTZ10B	
D627		8-719-083-56	30DF2N-FC5 (KV-XA25N90 ONLY)	
D628		8-719-911-19	1SS119-25	
D629		8-719-510-37	D5LC20U (KV-XA25M83 ONLY)	
D630		8-719-510-37	D5LC20U (KV-XA25M80/XA25N90)	
D630		8-719-052-74	FMX-12S (KV-XA25M83 ONLY)	
D631		8-719-068-00	ERC04-06SE	
D632		8-719-068-00	ERC04-06SE	
D633		8-719-948-45	ERA22-08	
D634		8-719-404-50	MA111-TX	
D635		8-719-404-50	MA111-TX	
D636		8-719-510-02	D1NS4	
D637		8-719-109-96	RD6.8ES-B1	
D638		8-719-510-48	D1N20R	
			<CONNECTOR>	
DY1		*1-580-798-11	CONNECTOR PIN (DY) 6P	
			<FERRITE BEAD>	
FB300		1-412-911-31	FERRITE 0UH	
FB501		1-410-397-21	FERRITE 1.1UH	
FB502		1-410-397-21	FERRITE 1.1UH	
FB600		1-410-397-21	FERRITE 1.1UH	
FB601		1-410-397-21	FERRITE 1.1UH	
FB602		1-410-397-21	FERRITE 1.1UH	
FB603		1-410-397-21	FERRITE 1.1UH	
FB604		1-412-911-31	FERRITE 0UH	
FB605		1-410-397-21	FERRITE 1.1UH	
FB606		1-412-911-31	FERRITE 0UH	
FB607		1-410-397-21	FERRITE 1.1UH (KV-XA25M83 ONLY)	
FB608		1-412-911-31	FERRITE 0UH	
FB611		1-410-397-21	FERRITE 1.1UH	
FB612		1-410-397-21	FERRITE 1.1UH	
FB613		1-410-397-21	FERRITE 1.1UH	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION	REMARK
FB615	1-410-397-21	FERRITE 1.1UH (KV-XA25M80/XA25M83)	
FB615	1-412-911-31	FERRITE 0UH (KV-XA25N90)	
		<IC>	
IC001	8-752-917-80	CXP750097-032S (KV-XA25M80/XA25M83)	
IC001	8-752-925-10	CXP750097-041S (KV-XA25N90)	
IC002	8-759-371-21	MM1319AFBE	
IC003	8-759-672-78	M24C08-BN6(A)	
IC100	8-759-042-02	S-80743AL-A7-S (KV-XA25M80/XA25M83 ONLY)	
IC301	8-752-095-72	CXA2159S	
IC302	8-759-666-90	TDA9181T	
IC502	8-759-700-07	NJM2903M	
IC503	8-759-980-58	TDA8172	
IC601	8-749-014-48	STR-F6656 (KV-XA25M80/XA25M83)	
IC601	8-749-019-09	STR-F6456 (KV-XA25N90)	
IC602	8-749-920-61	SE-135N	
IC603	8-759-701-59	NJM78M09FA	
IC604	8-759-231-53	TA7805S	
		<CHIP CONDUCTOR>	
JR001	1-216-295-91	SHORT 0	
JR002	1-216-295-91	SHORT 0	
JR003	1-216-295-91	SHORT 0	
JR004	1-216-295-91	SHORT 0	
JR006	1-216-295-91	SHORT 0	
JR007	1-216-295-91	SHORT 0	
JR008	1-216-295-91	SHORT 0	
JR010	1-216-295-91	SHORT 0	
JR012	1-216-295-91	SHORT 0	
JR014	1-216-295-91	SHORT 0	
JR015	1-216-295-91	SHORT 0	
JR016	1-216-295-91	SHORT 0	
JR020	1-216-295-91	SHORT 0	
JR022	1-216-295-91	SHORT 0	
JR023	1-216-295-91	SHORT 0	
JR024	1-216-295-91	SHORT 0	
JR025	1-216-295-91	SHORT 0	
JR028	1-216-295-91	SHORT 0	
JR030	1-216-295-91	SHORT 0	
JR031	1-216-295-91	SHORT 0	
JR102	1-216-295-91	SHORT 0 (KV-XA25M80/XA25M83 ONLY)	
JR107	1-216-295-91	SHORT 0	
JR108	1-216-295-91	SHORT 0 (KV-XA25N90 ONLY)	
JR109	1-216-295-91	SHORT 0 (KV-XA25M80/XA25M83)	
JR111	1-216-295-91	SHORT 0 (KV-XA25N90 ONLY)	
JR304	1-216-295-91	SHORT 0	
JR308	1-216-295-91	SHORT 0	
JR309	1-216-295-91	SHORT 0	
JR310	1-216-295-91	SHORT 0	
JR311	1-216-295-91	SHORT 0	
JR500	1-216-295-91	SHORT 0	
JR501	1-216-295-91	SHORT 0	
JR503	1-216-295-91	SHORT 0	
JR505	1-216-295-91	SHORT 0	
JR600	1-216-295-91	SHORT 0	

REF NO.	PART NO.	DESCRIPTION	REMARK
		<COIL>	
L002	1-414-856-11	INDUCTOR 10UH	
L003	1-414-180-11	INDUCTOR 3.3UH	
L005	1-414-233-22	FERRITE 0UH	
L101	1-414-856-11	INDUCTOR 10UH	
L102	1-414-856-11	INDUCTOR 10UH	
L103	1-414-856-11	INDUCTOR 10UH	
L104	1-414-856-11	INDUCTOR 10UH	
L105	1-414-856-11	INDUCTOR 10UH	
L301	1-414-189-31	INDUCTOR 100UH	
L302	1-414-185-41	INDUCTOR 22UH (KV-XA25M80/XA25M83)	
L302	1-414-856-11	INDUCTOR 10UH (KV-XA25N90)	
L303	1-414-189-31	INDUCTOR 100UH	
L304	1-414-189-31	INDUCTOR 100UH	
L501	1-412-525-31	INDUCTOR 10UH	
L502	1-422-613-11	COIL, AIR-CORE	
L503	1-412-525-31	INDUCTOR 10UH	
L504	1-412-525-31	INDUCTOR 10UH	
L507	1-416-931-11	INDUCTOR 0UH (KV-XA25M80/XA25M83)	
L507	1-459-111-00	INDUCTOR 10MH (KV-XA25N90)	
L511	1-406-978-11	INDUCTOR 150UH	
L512	1-412-549-31	INDUCTOR 1MH	
L513	1-412-549-31	INDUCTOR 1MH	
L515	1-459-104-00	COIL, CHOKE 10MMH (KV-XA25M80/XA25M83)	
L515	1-459-104-00	COIL, WITH CORE (KV-XA25N90)	
L518	1-414-187-11	INDUCTOR 47UH	
L601	1-412-527-11	INDUCTOR 15UH	
L905	1-414-856-11	INDUCTOR 10UH	
		<PHOTO COUPLER>	
PH600 ⚠	8-749-924-35	ON3171-R	
		<TRANSISTOR>	
Q001	8-729-216-22	2SA1162-G	
Q002	8-729-230-49	2SC2712-YG	
Q005	8-729-900-51	DTA114TK	
Q101	8-729-230-49	2SC2712-YG	
Q301	8-729-216-22	2SA1162-G	
Q302	8-729-230-49	2SC2712-YG	
Q303	8-729-216-22	2SA1162-G	
Q304	8-729-216-22	2SA1162-G	
Q305	8-729-216-22	2SA1162-G	
Q306	8-729-230-49	2SC2712-YG	
Q307	8-729-230-49	2SC2712-YG	
Q308	8-729-216-22	2SA1162-G	
Q309	8-729-421-19	UN2213	
Q310	8-729-230-49	2SC2712-YG	
Q311	8-729-230-49	2SC2712-YG	
Q312	8-729-216-22	2SA1162-G	
Q313	8-729-230-49	2SC2712-YG	
Q314	8-729-216-22	2SA1162-G	
Q315	8-729-421-19	UN2213	
Q316	8-729-216-22	2SA1162-G	
Q317	8-729-216-22	2SA1162-G	
Q503	8-729-230-49	2SC2712-YG	
Q505	8-729-931-45	IRF614	

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REF NO.	PART NO.	DESCRIPTION	REMARK
Q506	8-729-119-80	2SC2688-LK	
Q507	8-729-216-22	2SA1162-G	
Q509	8-729-230-49	2SC2712-YG	
Q511	8-729-048-07	2SD2578-CA	
Q600	8-729-119-78	2SC2785-HFE	
Q601	8-729-023-22	2SD2114K	
Q602	8-729-230-49	2SC2712-YG	
Q603	8-729-424-08	UN2111	
Q604	8-729-200-17	2SA1091-O	
Q605	8-729-044-30	2SK2845-LB102	
Q606	8-729-230-49	2SC2712-YG	
Q607	8-729-922-37	2SD2144S-UVW (KV-XA25M80/XA25M83)	
Q607	8-729-823-22	2SC3576 (KV-XA25N90)	
Q608	8-729-230-49	2SC2712-YG	
		<RESISTOR>	
R001	1-414-233-22	FERRITE 0UH	
R002	1-216-025-11	RES-CHIP 100 5%	1/10W
R003	1-216-073-91	RES-CHIP 10K 5%	1/10W
R004	1-216-025-11	RES-CHIP 100 5%	1/10W
R005	1-216-025-11	RES-CHIP 100 5%	1/10W
R006	1-216-689-11	RES-CHIP 39K 5% (KV-XA25N90 ONLY)	1/10W
R007	1-216-033-00	RES-CHIP 220 5% (KV-XA25N90 ONLY)	1/10W
R008	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R009	1-216-065-91	RES-CHIP 4.7K 5% (KV-XA25N90 ONLY)	1/10W
R010	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R011	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R012	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R013	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R014	1-216-025-11	RES-CHIP 100 5%	1/10W
R015	1-216-025-11	RES-CHIP 100 5%	1/10W
R018	1-216-033-00	RES-CHIP 220 5%	1/10W
R019	1-216-073-91	RES-CHIP 10K 5%	1/10W
R020	1-216-045-00	RES-CHIP 680 5%	1/10W
R021	1-216-073-91	RES-CHIP 10K 5%	1/10W
R022	1-216-025-11	RES-CHIP 100 5%	1/10W
R023	1-216-049-11	RES-CHIP 1K 5%	1/10W
R024	1-216-063-91	RES-CHIP 3.9K 5%	1/10W
R025	1-216-063-91	RES-CHIP 3.9K 5%	1/10W
R026	1-216-063-91	RES-CHIP 3.9K 5%	1/10W
R027	1-216-049-11	RES-CHIP 1K 5%	1/10W
R028	1-216-049-11	RES-CHIP 1K 5% (KV-XA25N90 ONLY)	1/10W
R029	1-216-049-11	RES-CHIP 1K 5%	1/10W
R030	1-216-025-11	RES-CHIP 100 5% (KV-XA25N90 ONLY)	1/10W
R031	1-216-049-11	RES-CHIP 1K 5%	1/10W
R032	1-216-025-11	RES-CHIP 100 5%	1/10W
R034	1-216-049-11	RES-CHIP 1K 5%	1/10W
R035	1-216-025-11	RES-CHIP 100 5%	1/10W
R036	1-216-025-11	RES-CHIP 100 5%	1/10W
R037	1-216-025-11	RES-CHIP 100 5% (KV-XA25M80/XA25M83)	1/10W
R037	1-216-077-91	RES-CHIP 15K 5% (KV-XA25N90)	1/10W
R038	1-216-049-11	RES-CHIP 1K 5%	1/10W
R040	1-216-025-11	RES-CHIP 100 5%	1/10W
R041	1-216-025-11	RES-CHIP 100 5%	1/10W

REF NO.	PART NO.	DESCRIPTION	REMARK
R042	1-216-295-91	SHORT 0	
R043	1-216-049-11	RES-CHIP 1K 5%	1/10W
R044	1-216-025-11	RES-CHIP 100 5%	1/10W
R045	1-414-233-22	FERRITE 0UH	
R046	1-216-049-11	RES-CHIP 1K 5%	1/10W
R047	1-414-233-22	FERRITE 0UH	
R048	1-216-073-91	RES-CHIP 10K 5%	1/10W
R050	1-216-073-91	RES-CHIP 10K 5%	1/10W
R053	1-216-049-11	RES-CHIP 1K 5%	1/10W
R058	1-216-295-91	SHORT 0	
R059	1-216-295-91	SHORT 0	
R060	1-216-295-91	SHORT 0	
R061	1-216-295-91	SHORT 0	
R062	1-216-041-00	RES-CHIP 470 5%	1/10W
R063	1-216-041-00	RES-CHIP 470 5%	1/10W
R064	1-216-041-00	RES-CHIP 470 5%	1/10W
R065	1-216-041-00	RES-CHIP 470 5%	1/10W
R066	1-216-049-11	RES-CHIP 1K 5%	1/10W
R067	1-216-049-11	RES-CHIP 1K 5%	1/10W
R068	1-216-041-00	RES-CHIP 470 5%	1/10W
R101	1-216-025-11	RES-CHIP 100 5% (KV-XA25M80/XA25M83 ONLY)	1/10W
R102	1-216-025-11	RES-CHIP 100 5% (KV-XA25M80/XA25M83 ONLY)	1/10W
R103	1-216-025-11	RES-CHIP 100 5% (KV-XA25N90 ONLY)	1/10W
R104	1-216-025-11	RES-CHIP 100 5% (KV-XA25N90 ONLY)	1/10W
R105	1-216-295-91	SHORT 0	
R106	1-216-049-11	RES-CHIP 1K 5% (KV-XA25N90 ONLY)	1/10W
R109	1-216-041-00	RES-CHIP 470 5%	1/10W
R111	1-216-025-11	RES-CHIP 100 5%	1/10W
R112	1-216-025-11	RES-CHIP 100 5%	1/10W
R113	1-216-025-11	RES-CHIP 100 5%	1/10W
R114	1-216-065-91	RES-CHIP 4.7K 5% (KV-XA25N90 ONLY)	1/10W
R115	1-216-065-91	RES-CHIP 4.7K 5% (KV-XA25N90 ONLY)	1/10W
R225	1-216-033-00	RES-CHIP 220 5%	1/10W
R226	1-216-033-00	RES-CHIP 220 5%	1/10W
R227	1-216-033-00	RES-CHIP 220 5%	1/10W
R237	1-216-295-91	SHORT 0	
R301	1-216-113-00	RES-CHIP 470K 5%	1/10W
R302	1-216-295-91	SHORT 0	
R303	1-216-049-11	RES-CHIP 1K 5%	1/10W
R304	1-216-073-91	RES-CHIP 10K 5%	1/10W
R308	1-216-025-11	RES-CHIP 100 5%	1/10W
R309	1-216-025-11	RES-CHIP 100 5%	1/10W
R310	1-216-025-11	RES-CHIP 100 5%	1/10W
R311	1-216-041-00	RES-CHIP 470 5%	1/10W
R312	1-216-039-00	RES-CHIP 390 5%	1/10W
R313	1-216-037-00	RES-CHIP 330 5%	1/10W
R314	1-216-083-00	RES-CHIP 27K 5%	1/10W
R315	1-216-053-00	RES-CHIP 1.5K 5%	1/10W
R316	1-216-037-00	RES-CHIP 330 5%	1/10W
R317	1-216-091-00	RES-CHIP 56K 5%	1/10W
R318	1-216-039-00	RES-CHIP 390 5%	1/10W
R319	1-216-025-11	RES-CHIP 100 5%	1/10W
R320	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R321	1-216-073-91	RES-CHIP 10K 5%	1/10W
R322	1-216-033-00	RES-CHIP 220 5%	1/10W

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REF NO.	PART NO.	DESCRIPTION			REMARK
R323	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R324	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R326	1-216-029-00	RES-CHIP	150	5%	1/10W
R327	1-216-033-00	RES-CHIP	220	5%	1/10W
R328	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R329	1-216-041-00	RES-CHIP	470	5%	1/10W
R331	1-216-295-91	SHORT	0		
R332	1-216-033-00	RES-CHIP	220	5%	1/10W
R335	1-216-045-00	RES-CHIP	680	5%	1/10W
R338	1-216-037-00	RES-CHIP	330	5%	1/10W
R339	1-216-033-00	RES-CHIP	220	5%	1/10W
R340	1-216-025-11	RES-CHIP	100	5%	1/10W
R345	1-216-081-00	RES-CHIP	22K	5%	1/10W
R348	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R349	1-216-073-91	RES-CHIP	10K	5%	1/10W
R350	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R351	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R354	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R355	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R356	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R357	1-216-079-00	RES-CHIP	18K	5%	1/10W
R358	1-216-049-11	RES-CHIP	1K	5%	1/10W
R359	1-216-033-00	RES-CHIP	220	5%	1/10W
R360	1-216-033-00	RES-CHIP	220	5%	1/10W
R361	1-216-073-91	RES-CHIP	10K	5%	1/10W
R362	1-216-075-00	RES-CHIP	12K	5%	1/10W
R363	1-216-079-00	RES-CHIP	18K	5%	1/10W
R364	1-216-295-91	SHORT	0		
R365	1-216-033-00	RES-CHIP	220	5%	1/10W
R366	1-216-073-91	RES-CHIP	10K	5%	1/10W
R367	1-216-073-91	RES-CHIP	10K	5%	1/10W
R368	1-216-073-91	RES-CHIP	10K	5%	1/10W
R370	1-216-033-00	RES-CHIP	220	5%	1/10W
R371	1-216-083-00	RES-CHIP	27K	5%	1/10W
R372	1-216-091-00	RES-CHIP	56K	5%	1/10W
R376	1-216-081-00	RES-CHIP	22K	5%	1/10W
R377	1-216-121-11	RES-CHIP	1M	5%	1/10W
R378	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R379	1-218-179-11	RES-CHIP	10M	5%	1/10W
R381	1-216-295-91	SHORT	0		
R382	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R383	1-216-049-11	RES-CHIP	1K	5%	1/10W
R384	1-216-041-00	RES-CHIP	470	5%	1/10W
R385	1-216-029-00	RES-CHIP	150	5%	1/10W
R391	1-216-295-91	SHORT	0		
R500	1-249-417-11	CARBON	1K	5%	1/4W
R501	1-216-049-11	RES-CHIP	1K	5%	1/10W
R505	1-216-105-91	RES-CHIP (KV-XA25M80/XA25M83)	220K	5%	1/10W
R505	1-218-756-11	METAL CHIP (KV-XA25N90)	150K	0.5%	1/10W
R506	1-216-089-91	RES-CHIP (KV-XA25M80/XA25M83)	47K	5%	1/10W
R506	1-216-685-11	METAL CHIP (KV-XA25N90)	27K	0.5%	1/10W
R507	1-249-389-11	CARBON	4.7	5%	1/4W
R508	1-216-473-11	METAL OXIDE	56	5%	3W
R509	1-215-910-00	METAL OXIDE (KV-XA25M80/XA25M83)	68	5%	3W
R509	1-216-475-11	METAL OXIDE (KV-XA25N90)	120	5%	3W
R510	1-215-884-11	METAL OXIDE	47	5%	2W
R511	1-215-910-00	METAL OXIDE	68	5%	3W

REF NO.	PART NO.	DESCRIPTION			REMARK
R515	1-215-913-11	METAL OXIDE	220	5%	3W
R516	1-216-081-00	RES-CHIP	22K	5%	1/10W
R518	1-247-807-31	CARBON	100	5%	1/4W
R519	1-215-912-11	METAL OXIDE (KV-XA25M80/XA25M83)	150	5%	3W
R519	1-215-913-11	METAL OXIDE (KV-XA25N90)	220	5%	3W
R520	1-249-429-11	CARBON	10K	5%	1/4W
R522	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R523	1-249-411-11	CARBON	330	5%	1/4W
R526	1-216-673-11	METAL CHIP	8.2K	0.5%	1/10W
R527	1-216-001-00	RES-CHIP	10	5%	1/10W
R528	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R529	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R531	1-247-843-11	CARBON	3.3K	5%	1/4W
R533	1-249-417-11	CARBON	1K	5%	1/4W
R534	1-216-361-00	METAL OXIDE	0.22	5%	2W
R535	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R536	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R537	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R540	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R541	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R542	1-216-295-91	SHORT	0		
R543	1-216-437-00	METAL OXIDE	5.6K	5%	1W
R544	1-215-917-11	METAL OXIDE	1K	5%	3W
R545	1-216-077-91	RES-CHIP	15K	5%	1/10W
R546	1-216-077-91	RES-CHIP	15K	5%	1/10W
R547	1-216-085-91	RES-CHIP	33K	5%	1/10W
R549	1-215-453-00	METAL	22K	1%	1/4W
R550	1-216-097-11	RES-CHIP	100K	5%	1/10W
R551	1-249-421-11	CARBON	2.2K	5%	1/4W
R552	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R553	1-215-453-00	METAL	22K	1%	1/4W
R554	1-215-457-00	METAL	33K	1%	1/4W
R556	1-215-437-00	METAL	4.7K	1%	1/4W
R558	1-247-843-11	CARBON	3.3K	5%	1/4W
R559	1-249-429-11	CARBON	10K	5%	1/4W
R560	1-216-073-91	RES-CHIP	10K	5%	1/10W
R562	1-249-401-11	CARBON	47	5%	1/4W
R565	1-216-073-91	RES-CHIP	10K	5%	1/10W
R567	1-216-105-91	RES-CHIP	220K	5%	1/10W
R568	1-249-383-11	CARBON	1.5	5%	1/4W
R570	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R571	1-215-443-00	METAL	8.2K	1%	1/4W
R573	1-216-089-91	RES-CHIP	47K	5%	1/10W
R574	1-216-113-00	RES-CHIP	470K	5%	1/10W
R577	1-215-913-11	METAL OXIDE	220	5%	3W
R578	1-216-369-00	METAL OXIDE	1	5%	2W
R579	1-216-097-11	RES-CHIP	100K	5%	1/10W
R580	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R581	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R583	1-216-109-00	RES-CHIP	330K	5%	1/10W
R584	1-216-295-91	SHORT	0		
R585	1-249-385-11	CARBON	2.2	5%	1/4W
R588	1-215-888-00	METAL OXIDE	220	5%	2W
R589	1-215-888-00	METAL OXIDE	220	5%	2W
R590	1-215-465-00	METAL	68K	1%	1/4W
R591	1-260-288-11	CARBON	0.47	5%	1/2W
R593	1-260-288-11	CARBON	0.47	5%	1/2W
R594	1-260-288-11	CARBON	0.47	5%	1/2W
R596	1-215-917-11	METAL OXIDE	1K	5%	3W
R597	1-247-750-11	CARBON	680	5%	1/2W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.		PART NO.	DESCRIPTION			REMARK
R598		1-249-438-11	CARBON	56K	5%	1/4W
R599		1-249-389-11	CARBON	4.7	5%	1/4W
R600		1-249-438-11	CARBON	56K	5%	1/4W
R601		1-249-419-11	CARBON	1.5K	5%	1/4W
R602		1-249-389-11	CARBON	4.7	5%	1/4W
R603		1-215-485-00	METAL	470K	1%	1/4W
R604		1-216-097-11	RES-CHIP	100K	5%	1/10W
R607		1-249-425-11	CARBON	4.7K	5%	1/4W
R608		1-240-205-91	CARBON	22M	5%	1/2W
R609		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R610		1-216-073-91	RES-CHIP	10K	5%	1/10W
R611		1-216-089-91	RES-CHIP	47K	5%	1/10W
R612		1-216-045-00	RES-CHIP	680	5%	1/10W
R614		1-216-041-00	RES-CHIP	470	5%	1/10W
R615		1-216-369-00	METAL OXIDE	1	5%	2W
R616		1-260-302-51	CARBON	6.8	5%	1/2W
R617		1-247-791-91	CARBON	22	5%	1/4W
R619		1-260-128-11	CARBON	270K	5%	1/2W
R621		1-215-864-00	METAL OXIDE	150	5%	1W
R623		1-216-095-00	RES-CHIP	82K	5%	1/10W
R624		1-216-089-91	RES-CHIP	47K	5%	1/10W
R626		1-216-049-11	RES-CHIP	1K	5%	1/10W
R627		1-240-251-11	CMT-MELF	6.8	5%	10W
R629		1-247-747-11	CARBON	470	5%	1/2W
R630		1-249-429-11	CARBON	10K	5%	1/4W
R631		1-216-089-91	RES-CHIP	47K	5%	1/10W
R632		1-220-886-11	FUSIBLE	0.1	10%	1W
R634	⚠	1-218-265-11	METAL	8.2M	5%	1W
R635		1-216-492-11	METAL OXIDE	82K	5%	3W
R636		1-215-924-00	METAL OXIDE	15K	5%	3W
R637		1-216-492-11	METAL OXIDE	82K	5%	3W
R639		1-216-361-21	METAL OXIDE	0.22	5%	2W
R640		1-249-415-11	CARBON	680	5%	1/4W
R641		1-216-361-21	METAL OXIDE	0.22	5%	2W
R642		1-249-419-11	CARBON	1.5K	5%	1/4W
R643		1-247-843-11	CARBON	3.3K	5%	1/4W
R644		1-249-419-11	CARBON	1.5K	5%	1/4W
R646		1-215-924-00	METAL OXIDE	15K	5%	3W
R647		1-249-387-11	CARBON	3.3	5%	1/4W
R648		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R649		1-249-417-11	CARBON	1K	5%	1/4W
R650		1-215-882-00	METAL OXIDE	22	5%	2W
R652		1-215-900-11	METAL OXIDE	22K	5%	2W
R653		1-215-873-00	METAL OXIDE	4.7K	5%	1W
R654		1-216-369-00	METAL OXIDE	1	5%	2W
R656		1-249-417-11	CARBON	1K	5%	1/4W
R657		1-260-127-11	CARBON	220K	5%	1/2W
R659		1-216-049-11	RES-CHIP	1K	5%	1/10W
R660		1-216-073-91	RES-CHIP	10K	5%	1/10W
R661		1-215-873-00	METAL OXIDE	4.7K	5%	1W
R682		1-219-134-11	FUSIBLE	0.1	10%	1/4W
R909		1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R910		1-216-065-91	RES-CHIP	4.7K	5%	1/10W
			<RELAY>			
RY600	⚠	1-755-214-11	RELAY, AC POWER			
RY601	⚠	1-755-214-11	RELAY, AC POWER			

REF NO.		PART NO.	DESCRIPTION	REMARK
			<SWITCH>	
S501		1-572-707-11	SWITCH, LEVER	
S502		1-572-707-11	SWITCH, LEVER	
			<TRANSFORMER>	
T501		1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE	
T503	⚠	1-453-357-21	TRANSFORMER ASSY FLY BACK (NX-4009//M3B4)(KV-XA25M80/XA25M83)	
T503	⚠	1-453-288-11	TRANSFORMER ASSY FLY BACK (NX-4009//C614)(KV-XA25N90)	
T504		1-435-122-11	TRANSFORMER, HORIZONTAL LINEAR	
T505		1-426-981-41	TRANSFORMER, FERRITE (PMT)	
T601	⚠	1-424-505-11	COIL, LINE FILTER	
T603	⚠	1-431-976-31	TRANSFORMER, CONVERTER	
T604	⚠	1-431-852-11	TRANSFORMER, CONVERTER (SRT)	
			<THERMISTOR>	
TH600		1-803-586-11	THERMISTOR, NTC	
			<THERMISTOR>	
THP600		1-803-540-11	THERMISTOR	
			<TUNER>	
TU101		8-598-449-10	TUNER, FSS BTF-LG433 (KV-XA25M80/XA25M83)	
TU101		8-598-477-30	TUNER, FSS BTF-WG411 (KV-XA25N90)	
			<VARISTOR>	
VDR600		1-803-830-11	VARISTOR (ERZV14D621) (KV-XA25N90 ONLY)	
			<CRYSTAL>	
X001		1-781-174-21	VIBRATOR, CERAMIC	
X301		1-781-134-21	VINRATOR, CRYSTAL	
X302		1-781-132-21	VIBRATOR, CTYSTAL	
******	*	**********	**********	
	*	A-1136-201-A	B BOARD COMPLETE (KV-XA25M80)	
	*	A-1136-207-A	B BOARD COMPLETE (KV-XA25M83)	
	*	A-1136-160-A	B BOARD COMPLETE (KV-XA25N90)	
			**********	
		4-382-854-11	SCREW (M3X10), P, SW (+)	
			<CAPACITOR>	

C1305	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1307	1-164-346-11	CERAMIC CHIP	1UF		16V
C1310	1-104-660-91	ELECT	47UF	20.00%	16V
C1312	1-104-660-91	ELECT	47UF	20.00%	16V
C1330	1-126-964-11	ELECT	10UF	20.00%	50V

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REF NO.	PART NO.	DESCRIPTION			REMARK
C1333	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1395	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1401	1-104-661-91	ELECT	330UF	20.00%	16V
C1402	1-104-664-11	ELECT	47UF	20.00%	25V
C1403	1-104-664-11	ELECT	47UF	20.00%	25V
C1404	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1405	1-104-664-11	ELECT	47UF	20.00%	25V
C1406	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C1408	1-126-964-11	ELECT	10UF	20.00%	50V
C1410	1-104-664-11	ELECT	47UF	20.00%	25V
C1411	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1413	1-126-935-11	ELECT	470UF	20.00%	16V
C1414	1-164-346-11	CERAMIC CHIP	1UF		16V
C1415	1-104-664-11	ELECT	47UF	20.00%	25V
C1416	1-164-346-11	CERAMIC CHIP	1UF		16V
C1418	1-163-031-91	CERAMIC CHIP	0.01UF		50V
C1419	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C1421	1-164-346-11	CERAMIC CHIP	1UF		16V
C1422	1-164-346-11	CERAMIC CHIP	1UF		16V
C1423	1-164-346-11	CERAMIC CHIP	1UF		16V
C1425	1-164-346-11	CERAMIC CHIP	1UF		16V
C1426	1-164-346-11	CERAMIC CHIP	1UF		16V
C1428	1-104-665-11	ELECT	100UF	20.00%	25V
C1429	1-104-663-11	ELECT	33UF	20.00%	25V
C1431	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1432	1-126-933-11	ELECT	100UF	20.00%	16V
C1433	1-104-660-91	ELECT	47UF	20.00%	16V
C1434	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1435	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1436	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1439	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1440	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1441	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1442	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1443	1-163-133-00	CERAMIC CHIP (KV-XA25N90 ONLY)	470PF	5.00%	50V
C1444	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1445	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1446	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1447	1-126-964-11	ELECT	10UF	20.00%	50V
C1448	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1449	1-126-933-11	ELECT	100UF	20.00%	16V
C1457	1-164-346-11	CERAMIC CHIP	1UF		16V
C1459	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1460	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1461	1-164-346-11	CERAMIC CHIP	1UF		16V
C1462	1-164-346-11	CERAMIC CHIP	1UF		16V
C1464	1-126-933-11	ELECT	100UF	20.00%	16V
C3201	1-126-964-11	ELECT	10UF	20.00%	50V
C3202	1-136-171-00	FILM (KV-XA25M80/XA25N90 ONLY)	0.33UF	5.00%	50V
C3203	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C3208	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C3209	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C3210	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C3211	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C3213	1-104-665-11	ELECT	100UF	20.00%	25V
C3214	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C3215	1-126-964-11	ELECT	10UF	20.00%	50V
C3216	1-126-964-11	ELECT	10UF	20.00%	50V
C3217	1-104-665-11	ELECT	100UF	20.00%	25V
C3218	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V

REF NO.	PART NO.	DESCRIPTION			REMARK
C3219	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C3220	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C3221	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C3222	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C3223	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C3224	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C3225	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C3226	1-126-964-11	ELECT	10UF	20.00%	50V
C3227	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C3228	1-107-698-11	ELECT	10UF	20.00%	25V
C3229	1-107-698-11	ELECT	10UF	20.00%	25V
C3230	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C3231	1-126-960-11	ELECT	1UF	20.00%	50V
C3232	1-126-960-11	ELECT	1UF	20.00%	50V
C3233	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C3234	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C3235	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C3236	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C3237	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C3238	1-164-005-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	0.47UF		25V
C3239	1-136-171-00	FILM (KV-XA25M80/XA25N90 ONLY)	0.33UF	5.00%	50V
C3240	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3241	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3242	1-126-965-91	ELECT	22UF	20.00%	50V
C3243	1-163-989-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	0.033UF	10.00%	25V
C3244	1-164-346-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	1UF		16V
C3245	1-164-005-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	0.47UF		25V
C3246	1-163-243-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	47PF	5.00%	50V
C3247	1-126-963-11	ELECT (KV-XA25M80/XA25N90 ONLY)	4.7UF	20.00%	50V
C3248	1-163-251-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	100PF	5.00%	50V
C3249	1-164-505-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	2.2UF		16V
C3249	1-216-295-91	SHORT	0 (KV-XA25M83)		
C3250	1-164-346-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	1UF		16V
C3251	1-126-964-11	ELECT (KV-XA25M80/XA25N90 ONLY)	10UF	20.00%	50V
C3252	1-163-251-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	100PF	5.00%	50V
C3253	1-126-933-11	ELECT (KV-XA25M80/XA25N90 ONLY)	100UF	20.00%	16V
C3254	1-164-505-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	2.2UF		16V
C3254	1-216-295-91	SHORT	0 (KV-XA25M83)		
C3255	1-163-243-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	47PF	5.00%	50V
C3256	1-126-963-11	ELECT (KV-XA25M80/XA25N90 ONLY)	4.7UF	20.00%	50V
C3257	1-164-346-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	1UF		16V
C3258	1-163-989-11	CERAMIC CHIP (KV-XA25M80/XA25N90 ONLY)	0.033UF	10.00%	25V
C3259	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3260	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C3262	1-104-660-91	ELECT	47UF	20.00%	16V
C3264	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C3265	1-117-720-11	CERAMIC CHIP	4.7UF		10V

B

REF NO.	PART NO.	DESCRIPTION		REMARK	
C3266	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C3267	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C3268	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C3269	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C3270	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3271	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3272	1-104-665-11	ELECT	100UF	20.00%	25V
C3273	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C3274	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C3275	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C3276	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C3277	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C3280	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C3281	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C6200	1-216-295-91	SHORT	0		
C6201	1-126-964-11	ELECT (KV-XA25M83 ONLY)	10UF	20.00%	50V
C6202	1-128-550-11	ELECT	2200UF	20.00%	50V
C6203	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6204	1-128-550-11	ELECT	2200UF	20.00%	50V
C6205	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C6206	1-128-550-11	ELECT	2200UF	20.00%	50V
C6207	1-164-004-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.1UF	10.00%	25V
C6208	1-164-004-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.1UF	10.00%	25V
C6209	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C6210	1-126-924-11	ELECT	330UF	20.00%	10V
C6211	1-126-924-11	ELECT	330UF	20.00%	10V
C6212	1-104-664-11	ELECT	47UF	20.00%	25V
C6213	1-126-964-11	ELECT	10UF	20.00%	50V
C6215	1-126-933-11	ELECT (KV-XA25M83 ONLY)	100UF	20.00%	16V
C6216	1-126-960-11	ELECT (KV-XA25M83 ONLY)	1UF	20.00%	50V
C6217	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6218	1-164-004-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.1UF	10.00%	25V
C6219	1-126-961-11	ELECT (KV-XA25M83 ONLY)	2.2UF	20.00%	50V
C6220	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C6221	1-126-959-11	ELECT (KV-XA25M83 ONLY)	0.47UF	20.00%	50V
C6222	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C6223	1-126-960-11	ELECT	1UF	20.00%	50V
C6225	1-164-004-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.1UF	10.00%	25V
C6226	1-164-004-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.1UF	10.00%	25V
C6227	1-128-550-11	ELECT (KV-XA25M83 ONLY)	2200UF	20%	50V
C6228	1-164-004-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.1UF	10.00%	25V
C6229	1-164-505-11	CERAMIC CHIP (KV-XA25M83 ONLY)	2.2UF		16V
C6230	1-164-004-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.1UF	10.00%	25V
C6231	1-128-550-11	ELECT (KV-XA25M83 ONLY)	2200UF	20%	50V
C6232	1-163-275-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.001UF	5.00%	50V
C6233	1-163-007-11	CERAMIC CHIP (KV-XA25M83 ONLY)	680PF	10.00%	50V
C6234	1-163-017-00	CERAMIC CHIP (KV-XA25M83 ONLY)	0.0047UF	10.00%	50V
C6235	1-163-251-11	CERAMIC CHIP (KV-XA25M83 ONLY)	100PF	5.00%	50V
C6236	1-164-004-11	CERAMIC CHIP (KV-XA25M83 ONLY)	0.1UF	10.00%	25V
C6237	1-136-177-00	FILM (KV-XA25M83 ONLY)	1UF	5.00%	50V
C6238	1-163-009-91	CERAMIC CHIP (KV-XA25M83 ONLY)	0.001UF	10.00%	50V
C6239	1-127-682-51	ELECT MELF (KV-XA25M83 ONLY)	2200UF	20%	25V
C6240	1-130-495-00	MYLAR (KV-XA25M83 ONLY)	0.1UF	5.00%	50V
C6241	1-126-964-11	ELECT	10UF	20.00%	50V
C6244	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C6245	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C6249	1-216-295-91	SHORT	0		
C6251	1-126-965-91	ELECT (KV-XA25M83 ONLY)	22UF	20.00%	50V
C6252	1-126-965-91	ELECT (KV-XA25M83 ONLY)	22UF	20.00%	50V
C6253	1-126-959-11	ELECT (KV-XA25M83 ONLY)	0.47UF	20.00%	50V

<CONNECTOR>

CN1300*	1-564-506-11	PLUG, CONNECTOR 3P
CN1400*	1-564-512-11	PLUG, CONNECTOR 9P
CN1401*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P
CN1403*	1-564-506-11	PLUG, CONNECTOR 3P
CN1405*	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
CN1406*	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
CN1407*	1-779-891-11	CONNECTOR, BOARD TO BOARD 8P
CN1409	1-764-818-11	CONNECTOR, BOARD TO BOARD 10P
CN6200*	1-564-507-11	PLUG, CONNECTOR 4P
CN6202*	1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M83 ONLY)
CN6204*	1-564-509-11	PLUG, CONNECTOR 6P
CN6205*	1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M83 ONLY)
CN6206*	1-564-508-11	PLUG, CONNECTOR 5P

<DIODE>

D1401	8-719-069-60	UDZSTE-179.1B
D1402	8-719-069-60	UDZSTE-179.1B
D1403	8-719-069-60	UDZSTE-179.1B
D1404	8-719-069-60	UDZSTE-179.1B
D1405	8-719-069-60	UDZSTE-179.1B
D1406	8-719-069-60	UDZSTE-179.1B
D1407	8-719-069-60	UDZSTE-179.1B
D1408	8-719-069-60	UDZSTE-179.1B
D1409	8-719-069-60	UDZSTE-179.1B
D1410	8-719-069-60	UDZSTE-179.1B
D1411	8-719-069-60	UDZSTE-179.1B
D1412	8-719-069-60	UDZSTE-179.1B
D1415	8-719-069-60	UDZSTE-179.1B
D1416	8-719-069-60	UDZSTE-179.1B
D1418	8-719-069-60	UDZSTE-179.1B
D3201	8-719-988-61	1SS355TE-17 (KV-XA25M80/XA25N90)
D3203	8-719-988-61	1SS355TE-17 (KV-XA25M80/XA25N90)
D6200	8-719-109-86	RD5.1ES-B3 (KV-XA25M83 ONLY)
D6210	8-719-914-42	DA204K
D6211	8-719-404-50	MA111-TX
D6212	8-719-404-50	MA111-TX

B

REF NO.	PART NO.	DESCRIPTION	REMARK
		<FERRITE BEAD>	
FB6201	1-410-397-21	FERRITE 1.1UH (KV-XA25M83 ONLY)	
FB6202	1-410-397-21	FERRITE 1.1UH (KV-XA25M83 ONLY)	
		<IC>	
IC1401	8-752-068-46	CXA1855S	
IC1402	8-759-100-96	UPC4558G2	
IC1404	8-759-701-59	NJM78M09FA	
IC3200	8-759-100-96	UPC4558G2	
IC3201	8-759-689-71	NJM2188M-TE2	
IC3202	8-759-100-96	UPC4558G2	
IC3203	8-759-711-10	NJU4066BM	
IC3204	8-759-100-96	UPC4558G2 (KV-XA25M80/XA25N90)	
IC3205	8-752-058-68	CXA1315M	
IC3206	8-759-690-57	BH3868BFS-E2	
IC6200	8-759-168-24	TA8200AH	
IC6201	8-759-553-45	TDA7481 (KV-XA25M83 ONLY)	
		<JACK>	
J1401	1-784-646-11	TERMINAL, S	
J1402	1-778-387-11	JACK BLOCK, PIN 12P	
		<CHIP CONDUCTOR>	
JR1303	1-216-295-91	SHORT 0	
JR1405	1-216-295-91	SHORT 0	
JR1406	1-216-295-91	SHORT 0	
JR1407	1-216-295-91	SHORT 0	
JR1409	1-216-295-91	SHORT 0	
JR1410	1-216-295-91	SHORT 0	
JR1411	1-216-295-91	SHORT 0	
JR3202	1-216-295-91	SHORT 0	
JR3204	1-216-295-91	SHORT 0	
JR3209	1-216-295-91	SHORT 0	
JR3210	1-216-295-91	SHORT 0	
JR3211	1-216-295-91	SHORT 0	
JR3212	1-216-295-91	SHORT 0	
JR6200	1-216-295-91	SHORT 0	
JR6202	1-216-295-91	SHORT 0	
JR6203	1-216-295-91	SHORT 0	
JR6204	1-216-295-91	SHORT 0	
JR6206	1-216-295-91	SHORT 0	
		<COIL>	
L1313	1-414-187-11	INDUCTOR 47UH	
L1314	1-414-856-11	INDUCTOR 10UH	
L1315	1-414-856-11	INDUCTOR 10UH	
L1317	1-414-856-11	INDUCTOR 10UH	
L1404	1-412-537-31	INDUCTOR 100UH	
L3202	1-414-856-11	INDUCTOR 10UH	
L6202	1-416-857-11	INDUCTOR 65UH (KV-XA25M83 ONLY)	
		<IC LINK>	
PS6200	1-576-337-21	LINK, IC (KV-XA25M83 ONLY)	
PS6201	1-576-337-21	LINK, IC (KV-XA25M83 ONLY)	

REF NO.	PART NO.	DESCRIPTION	REMARK
		<TRANSISTOR>	
Q1316	8-729-216-22	2SA1162-G	
Q1317	8-729-230-49	2SC2712-YG	
Q1318	8-729-230-49	2SC2712-YG	
Q1323	8-729-230-49	2SC2712-YG	
Q1324	8-729-230-49	2SC2712-YG	
Q1365	8-729-230-49	2SC2712-YG	
Q1372	8-729-230-49	2SC2712-YG	
Q1402	8-729-216-22	2SA1162-G	
Q1403	8-729-230-49	2SC2712-YG	
Q1404	8-729-230-49	2SC2712-YG	
Q1408	8-729-230-49	2SC2712-YG	
Q1409	8-729-230-49	2SC2712-YG	
Q3201	8-729-224-62	2SK246-GR (KV-XA25M80/XA25N90)	
Q3202	8-729-230-49	2SC2712-YG (KV-XA25M80/XA25N90)	
Q3203	8-729-230-49	2SC2712-YG	
Q3204	8-729-224-62	2SK246-GR (KV-XA25M80/XA25N90)	
Q6200	8-729-216-22	2SA1162-G (KV-XA25M83 ONLY)	
Q6201	8-729-421-19	UN2213	
Q6202	8-729-216-22	2SA1162-G (KV-XA25M83 ONLY)	
Q6203	8-729-421-19	UN2213	
Q6204	8-729-421-19	UN2213	
Q6205	8-729-216-22	2SA1162-G (KV-XA25M83 ONLY)	
Q6206	8-729-216-22	2SA1162-G (KV-XA25M83 ONLY)	
Q6207	8-729-224-62	2SK246-GR (KV-XA25M83 ONLY)	
Q6208	8-729-421-19	UN2213	
Q6214	8-729-421-19	UN2213 (KV-XA25M83 ONLY)	
		<RESISTOR>	
R1301	1-216-041-00	RES-CHIP 470 5% 1/10W	
R1318	1-216-033-00	RES-CHIP 220 5% 1/10W	
R1320	1-216-081-00	RES-CHIP 22K 5% 1/10W	
R1343	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R1344	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1345	1-216-041-00	RES-CHIP 470 5% 1/10W	
R1346	1-216-041-00	RES-CHIP 470 5% 1/10W	
R1347	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1350	1-216-085-91	RES-CHIP 33K 5% 1/10W	
R1359	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1360	1-216-041-00	RES-CHIP 470 5% 1/10W	
R1361	1-216-041-00	RES-CHIP 470 5% 1/10W	
R1362	1-216-055-00	RES-CHIP 1.8K 5% 1/10W	
R1363	1-216-033-00	RES-CHIP 220 5% 1/10W	
R1364	1-216-089-91	RES-CHIP 47K 5% 1/10W	
R1365	1-216-081-00	RES-CHIP 22K 5% 1/10W	
R1366	1-216-295-91	SHORT 0	
R1368	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R1369	1-216-025-11	RES-CHIP 100 5% 1/10W	
R1370	1-216-041-00	RES-CHIP 470 5% 1/10W	
R1371	1-216-039-00	RES-CHIP 390 5% 1/10W	
R1372	1-216-041-00	RES-CHIP 470 5% 1/10W	
R1397	1-216-045-00	RES-CHIP 680 5% 1/10W	
R1400	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R1403	1-216-033-00	RES-CHIP 220 5% 1/10W	
R1404	1-216-295-91	SHORT 0	
R1406	1-216-013-00	RES-CHIP 33 5% 1/10W	
R1407	1-216-033-00	RES-CHIP 220 5% 1/10W	
R1408	1-216-031-00	RES-CHIP 180 5% 1/10W	
R1409	1-216-105-91	RES-CHIP 220K 5% 1/10W	

B

REF NO.	PART NO.	DESCRIPTION		REMARK	
R1410	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1411	1-216-089-91	RES-CHIP	47K	5%	1/10W
R1412	1-216-089-91	RES-CHIP	47K	5%	1/10W
R1413	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1414	1-216-025-11	RES-CHIP	100	5%	1/10W
R1417	1-216-025-11	RES-CHIP	100	5%	1/10W
R1418	1-216-025-11	RES-CHIP	100	5%	1/10W
R1421	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1424	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1425	1-216-047-91	RES-CHIP	820	5%	1/10W
R1426	1-216-025-11	RES-CHIP	100	5%	1/10W
R1427	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R1428	1-216-025-11	RES-CHIP	100	5%	1/10W
R1429	1-216-089-91	RES-CHIP	47K	5%	1/10W
R1430	1-216-025-11	RES-CHIP	100	5%	1/10W
R1431	1-216-025-11	RES-CHIP	100	5%	1/10W
R1432	1-216-041-00	RES-CHIP	470	5%	1/10W
R1433	1-216-025-11	RES-CHIP	100	5%	1/10W
R1435	1-216-022-00	RES-CHIP	75	5%	1/10W
R1436	1-216-025-11	RES-CHIP	100	5%	1/10W
R1437	1-216-022-00	RES-CHIP	75	5%	1/10W
R1438	1-216-025-11	RES-CHIP	100	5%	1/10W
R1439	1-216-295-91	SHORT	0		
R1441	1-216-025-11	RES-CHIP	100	5%	1/10W
R1442	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1443	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1444	1-216-089-91	RES-CHIP	47K	5%	1/10W
R1445	1-216-025-11	RES-CHIP	100	5%	1/10W
R1446	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1447	1-216-025-11	RES-CHIP	100	5%	1/10W
R1448	1-216-043-91	RES-CHIP	560	5%	1/10W
R1449	1-249-429-11	CARBON	10K	5%	1/4W
R1450	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1451	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1452	1-216-089-91	RES-CHIP	47K	5%	1/10W
R1453	1-216-025-11	RES-CHIP	100	5%	1/10W
R1454	1-216-091-00	RES-CHIP	56K	5%	1/10W
R1455	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1456	1-216-113-00	RES-CHIP	470K	5%	1/10W
R1457	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1458	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1459	1-216-025-11	RES-CHIP	100	5%	1/10W
R1460	1-216-033-00	RES-CHIP	220	5%	1/10W
R1461	1-216-025-11	RES-CHIP	100	5%	1/10W
R1463	1-249-429-11	CARBON	10K	5%	1/4W
R1464	1-216-113-00	RES-CHIP	470K	5%	1/10W
R1465	1-216-113-00	RES-CHIP	470K	5%	1/10W
R1466	1-216-033-00	RES-CHIP	220	5%	1/10W
R1467	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1468	1-216-093-91	RES-CHIP	68K	5%	1/10W
R1469	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1470	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1471	1-216-022-00	RES-CHIP	75	5%	1/10W
R1472	1-216-033-00	RES-CHIP	220	5%	1/10W
R1473	1-216-033-00	RES-CHIP	220	5%	1/10W
R1475	1-216-089-91	RES-CHIP	47K	5%	1/10W
R1476	1-216-091-00	RES-CHIP	56K	5%	1/10W
R1477	1-216-047-91	RES-CHIP	820	5%	1/10W
R1478	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R1479	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1480	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1481	1-216-022-00	RES-CHIP	75	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R1482	1-216-025-11	RES-CHIP	100	5%	1/10W
R1483	1-216-025-11	RES-CHIP	100	5%	1/10W
R1484	1-216-025-11	RES-CHIP	100	5%	1/10W
R1485	1-216-025-11	RES-CHIP	100	5%	1/10W
R1486	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R1487	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1488	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1489	1-216-022-00	RES-CHIP	75	5%	1/10W
R1490	1-216-025-11	RES-CHIP	100	5%	1/10W
R1491	1-216-025-11	RES-CHIP	100	5%	1/10W
R1492	1-216-021-00	RES-CHIP	68	5%	1/10W
R1493	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R1496	1-216-041-00	RES-CHIP	470	5%	1/10W
R1497	1-216-041-00	RES-CHIP	470	5%	1/10W
R1498	1-216-025-11	RES-CHIP	100	5%	1/10W
R1499	1-216-025-11	RES-CHIP	100	5%	1/10W
R1500	1-216-025-11	RES-CHIP	100	5%	1/10W
R1501	1-216-045-00	RES-CHIP	680	5%	1/10W
R1503	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1504	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1505	1-216-022-00	RES-CHIP	75	5%	1/10W
R1506	1-216-033-00	RES-CHIP	220	5%	1/10W
R3200	1-216-121-11	RES-CHIP (KV-XA25M80/XA25N90)	1M	5%	1/10W
R3201	1-216-121-11	RES-CHIP (KV-XA25M80/XA25N90)	1M	5%	1/10W
R3202	1-216-097-11	RES-CHIP (KV-XA25M80/XA25N90)	100K	5%	1/10W
R3203	1-216-121-11	RES-CHIP (KV-XA25M80/XA25N90)	1M	5%	1/10W
R3204	1-216-061-91	RES-CHIP (KV-XA25M80/XA25N90)	3.3K	5%	1/10W
R3205	1-216-069-00	RES-CHIP (KV-XA25M80/XA25N90)	6.8K	5%	1/10W
R3206	1-216-039-00	RES-CHIP (KV-XA25M80/XA25N90)	390	5%	1/10W
R3207	1-216-073-91	RES-CHIP (KV-XA25M80/XA25N90)	10K	5%	1/10W
R3208	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R3209	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3210	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R3211	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3212	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R3213	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R3214	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R3215	1-216-095-00	RES-CHIP	82K	5%	1/10W
R3216	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R3217	1-216-085-91	RES-CHIP	33K	5%	1/10W
R3218	1-216-091-00	RES-CHIP	56K	5%	1/10W
R3219	1-216-073-91	RES-CHIP	10K	5%	1/10W
R3220	1-216-097-11	RES-CHIP (KV-XA25M80/XA25N90)	100K	5%	1/10W
R3221	1-216-073-91	RES-CHIP (KV-XA25M80/XA25N90)	10K	5%	1/10W
R3222	1-216-073-91	RES-CHIP (KV-XA25M80/XA25N90)	10K	5%	1/10W
R3223	1-216-045-00	RES-CHIP (KV-XA25M80/XA25N90)	680	5%	1/10W
R3224	1-216-101-00	RES-CHIP	150K	5%	1/10W
R3225	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R3226	1-216-095-00	RES-CHIP	82K	5%	1/10W
R3227	1-216-091-00	RES-CHIP	56K	5%	1/10W
R3228	1-216-085-91	RES-CHIP	33K	5%	1/10W

B

REF NO.	PART NO.	DESCRIPTION			REMARK
R3229	1-216-025-11	RES-CHIP	100	5%	1/10W
R3230	1-216-025-11	RES-CHIP	100	5%	1/10W
R3231	1-216-073-91	RES-CHIP	10K	5%	1/10W
R3232	1-216-073-91	RES-CHIP	10K	5%	1/10W
R3233	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3234	1-216-039-00	RES-CHIP	390	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3235	1-216-101-00	RES-CHIP	150K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3236	1-216-113-00	RES-CHIP	470K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3237	1-216-045-00	RES-CHIP	680	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3238	1-216-073-91	RES-CHIP	10K	5%	1/10W
R3239	1-216-073-91	RES-CHIP	10K	5%	1/10W
R3240	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3241	1-216-093-91	RES-CHIP	68K	5%	1/10W
R3242	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3243	1-216-121-11	RES-CHIP	1M	5%	1/10W
R3244	1-216-121-11	RES-CHIP	1M	5%	1/10W
R3245	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3246	1-216-045-00	RES-CHIP	680	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3247	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R3248	1-216-025-11	RES-CHIP	100	5%	1/10W
R3249	1-216-025-11	RES-CHIP	100	5%	1/10W
R3251	1-216-101-00	RES-CHIP	150K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3252	1-216-113-00	RES-CHIP	470K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3253	1-216-045-00	RES-CHIP	680	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3254	1-216-073-91	RES-CHIP	10K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3255	1-216-121-11	RES-CHIP	1M	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3256	1-216-121-11	RES-CHIP	1M	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3257	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3258	1-216-121-11	RES-CHIP	1M	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3259	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
		(KV-XA25M80/XA25N90)			
R3262	1-216-101-00	RES-CHIP	150K	5%	1/10W
R3263	1-216-093-91	RES-CHIP	68K	5%	1/10W
R3267	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3268	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3269	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3271	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R3273	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3274	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R3275	1-216-295-91	SHORT	0 (KV-XA25M83 ONLY)		
R3276	1-216-295-91	SHORT	0 (KV-XA25M83 ONLY)		
R6200	1-216-089-91	RES-CHIP	47K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6201	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6202	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6203	1-216-295-91	SHORT	0		
R6205	1-216-073-91	RES-CHIP	10K	5%	1/10W
		(KV-XA25M83 ONLY)			

REF NO.	PART NO.	DESCRIPTION			REMARK
R6207	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6209	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6213	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6214	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6219	1-216-089-91	RES-CHIP	47K	5%	1/10W
R6235	1-216-029-00	RES-CHIP	150	5%	1/10W
		(KV-XA25M83 ONLY)			
R6236	1-216-075-00	RES-CHIP	12K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6237	1-216-089-91	RES-CHIP	47K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6239	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6240	1-249-429-11	CARBON	10K	5%	1/4W
		(KV-XA25M83 ONLY)			
R6241	1-215-890-11	METAL OXIDE	470	5%	2W
		(KV-XA25M83 ONLY)			
R6242	1-215-890-11	METAL OXIDE	470	5%	2W
		(KV-XA25M83 ONLY)			
R6243	1-249-392-11	CARBON	8.2	5%	1/4W
		(KV-XA25M83 ONLY)			
R6244	1-216-073-91	RES-CHIP	10K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6245	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6246	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6248	1-216-041-00	RES-CHIP	470	5%	1/10W
		(KV-XA25M83 ONLY)			
R6249	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6250	1-216-295-91	SHORT	0 (KV-XA25M83 ONLY)		
R6251	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6252	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6253	1-216-041-00	RES-CHIP	470	5%	1/10W
		(KV-XA25M83 ONLY)			
R6254	1-216-021-00	RES-CHIP	68	5%	1/10W
		(KV-XA25M80/XA25N90)			
R6254	1-216-009-91	RES-CHIP	22	5%	1/10W
		(KV-XA25M83 ONLY)			
R6255	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R6256	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6257	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6258	1-216-021-00	RES-CHIP	68	5%	1/10W
		(KV-XA25M80/XA25N90)			
R6258	1-216-009-91	RES-CHIP	22	5%	1/10W
		(KV-XA25M83)			
R6259	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R6260	1-216-073-91	RES-CHIP	10K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6262	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6263	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6266	1-216-089-91	RES-CHIP	47K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6268	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(KV-XA25M83 ONLY)			
R6278	1-216-295-91	SHORT	0		

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B1

REF NO.	PART NO.	DESCRIPTION			REMARK
	* A-1131-685-A	B1 BOARD MOUNTED (KV-XA25M80/XA25M83)			
	* A-1131-652-A	B1 BOARD MOUNTED (KV-XA25N90)			
		**********			
		<CAPACITOR>			
C1513	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1514	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1515	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
C1517	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1518	1-126-967-11	ELECT	47UF	20.00%	50V
C1519	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1520	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1522	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1523	1-163-255-11	CERAMIC CHIP	150PF	5.00%	50V
C1524	1-163-113-00	CERAMIC CHIP	68PF	5.00%	50V
C1525	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1526	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1528	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1529	1-163-255-11	CERAMIC CHIP	150PF	5.00%	50V
C1530	1-163-113-00	CERAMIC CHIP	68PF	5.00%	50V
C1543	1-126-933-11	ELECT	100UF	20.00%	16V
C1544	1-165-319-11	CERAMIC CHIP	0.1UF		50V
C1554	1-165-319-11	CERAMIC CHIP	0.1UF		50V
C1555	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1556	1-163-038-91	CERAMIC CHIP	0.1UF		25V
		<CONNECTOR>			
CN1501	* 1-564-511-11	PLUG, CONNECTOR 8P			
CN1502	* 1-564-508-11	PLUG, CONNECTOR 5P			
CN1503	1-764-811-11	CONNECTOR, BOARD TO BOARD 10P			
		<DIODE>			
D1501	8-719-158-35	RD9.1S-B			
		<IC>			
IC1502	8-759-439-64	HEF4053BT			
		<COIL>			
L1501	1-414-856-11	INDUCTOR	10UH		
L1506	1-414-857-11	INDUCTOR	100UH		
L1507	1-414-187-11	INDUCTOR	47UH		
L1508	1-414-187-11	INDUCTOR	47UH		
L1509	1-414-857-11	INDUCTOR	100UH		
L1510	1-414-187-11	INDUCTOR	47UH		
L1511	1-414-187-11	INDUCTOR	47UH		
		<TRANSISTOR>			
Q1501	8-729-230-49	2SC2712-YG			
Q1502	8-729-216-22	2SA1162-G			
Q1503	8-729-230-49	2SC2712-YG			
Q1504	8-729-230-49	2SC2712-YG			
Q1505	8-729-230-49	2SC2712-YG			
Q1506	8-729-230-49	2SC2712-YG			
Q1507	8-729-216-22	2SA1162-G			
Q1509	8-729-230-49	2SC2712-YG			
Q1510	8-729-230-49	2SC2712-YG			
Q1511	8-729-216-22	2SA1162-G			
Q1514	8-729-230-49	2SC2712-YG			
Q1515	8-729-230-49	2SC2712-YG			
Q1516	8-729-216-22	2SA1162-G			
Q1520	8-729-230-49	2SC2712-YG			
Q1522	8-729-230-49	2SC2712-YG			
Q1523	8-729-216-22	2SA1162-G			
		<RESISTOR>			
R1501	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1502	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1503	1-216-025-11	RES-CHIP	100	5%	1/10W
R1504	1-216-025-11	RES-CHIP	100	5%	1/10W
R1506	1-216-025-11	RES-CHIP	100	5%	1/10W
R1507	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1508	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1511	1-216-033-00	RES-CHIP	220	5%	1/10W
R1512	1-216-005-00	RES-CHIP	15	5%	1/10W
R1515	1-216-041-00	RES-CHIP	470	5%	1/10W
R1516	1-216-025-11	RES-CHIP	100	5%	1/10W
R1517	1-216-075-00	RES-CHIP	12K	5%	1/10W
R1520	1-216-079-00	RES-CHIP	18K	5%	1/10W
R1522	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1523	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1528	1-216-033-00	RES-CHIP	220	5%	1/10W
R1529	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R1531	1-216-045-00	RES-CHIP	680	5%	1/10W
R1537	1-216-041-00	RES-CHIP	470	5%	1/10W
R1538	1-216-041-00	RES-CHIP	470	5%	1/10W
R1540	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1541	1-216-041-00	RES-CHIP	470	5%	1/10W
R1542	1-216-041-00	RES-CHIP	470	5%	1/10W
R1543	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1545	1-216-041-00	RES-CHIP	470	5%	1/10W
R1547	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1548	1-216-025-11	RES-CHIP	100	5%	1/10W
R1549	1-216-075-00	RES-CHIP	12K	5%	1/10W
R1551	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1552	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1553	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1554	1-216-033-00	RES-CHIP	220	5%	1/10W
R1556	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1559	1-216-041-00	RES-CHIP	470	5%	1/10W
R1560	1-216-041-00	RES-CHIP	470	5%	1/10W
R1561	1-216-041-00	RES-CHIP	470	5%	1/10W
R1562	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1563	1-216-041-00	RES-CHIP	470	5%	1/10W
R1566	1-216-041-00	RES-CHIP	470	5%	1/10W
R1567	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1568	1-216-041-00	RES-CHIP	470	5%	1/10W
R1569	1-216-049-11	RES-CHIP	1K	5%	1/10W

****** * **********

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

C6

REF NO.		PART NO.	DESCRIPTION		REMARK
	*	A-1332-177-A	C6 BOARD MOUNTED (KV-XA25M80/XA25M83)		
	*	A-1332-147-A	C6 BOARD MOUNTED (KV-XA25N90)		
			**********		
		4-352-844-01	PIN, LEAD, COATING		
		4-382-854-11	SCREW (M3X10), P, SW (+)		
			<CAPACITOR>		
C701		1-162-114-00	CERAMIC 0.0047UF		2KV
C702		1-102-074-00	CERAMIC 0.001UF	10.00%	50V
C708		1-102-114-00	CERAMIC 470PF	10.00%	50V
C709		1-102-114-00	CERAMIC 470PF	10.00%	50V
C710		1-102-114-00	CERAMIC 470PF	10.00%	50V
C712		1-102-115-00	CERAMIC 560PF	10.00%	50V
C713		1-102-112-00	CERAMIC 330PF	10.00%	50V
C714		1-102-113-00	CERAMIC 390PF	10.00%	50V
C716		1-126-933-11	ELECT 100UF	20.00%	16V
C717		1-107-651-11	ELECT 4.7UF	20.00%	250V
C1800		1-126-964-11	ELECT 10UF	20.00%	50V
C1803		1-126-964-11	ELECT 10UF	20.00%	50V
C1804		1-126-964-11	ELECT 10UF	20.00%	50V
C1809		1-126-942-61	ELECT 1000UF	20.00%	25V
			<CONNECTOR>		
CN700		1-695-915-11	TAB (CONTACT)		
CN702		1-695-915-11	TAB (CONTACT)		
CN703	*	1-564-509-11	PLUG, CONNECTOR 6P		
CN704		1-695-915-11	TAB (CONTACT)		
CN712		1-564-507-11	PLUG, CONNECTOR 4P		
CN1801	*	1-564-509-11	PLUG, CONNECTOR 6P		
CN1802	*	1-564-506-11	PLUG, CONNECTOR 3P		
			<DIODE>		
D701		8-719-911-19	1SS119-25		
D702		8-719-911-19	1SS119-25		
D703		8-719-911-19	1SS119-25		
D704		8-719-911-19	1SS119-25		
D705		8-719-911-19	1SS119-25		
D706		8-719-911-19	1SS119-25		
D707		8-719-911-19	1SS119-25		
D708		8-719-911-19	1SS119-25		
D709		8-719-911-19	1SS119-25		
D710		8-719-911-19	1SS119-25		
D711		8-719-911-19	1SS119-25		
D712		8-719-911-19	1SS119-25		
D716		8-719-911-19	1SS119-25		
D717		8-719-929-15	HZS9.1NB2		
D1803		8-719-911-19	1SS119-25		
D1804		8-719-911-19	1SS119-25		
D1808		8-719-908-03	GP08D		
			<IC>		
IC1800		8-759-822-38	LA6510		
			<JACK>		
J701	⚠	1-540-071-22	SOCKET, CRT		

REF NO.	PART NO.	DESCRIPTION			REMARK
		<COIL>			
L701	1-410-667-31	INDUCTOR	22UH		
L703	1-414-187-11	INDUCTOR	47UH		
L705	1-414-186-31	INDUCTOR	33UH		
L707	1-414-187-11	INDUCTOR	47UH		
		<TRANSISTOR>			
Q701	8-729-326-11	2SC2611			
Q702	8-729-326-11	2SC2611			
Q703	8-729-326-11	2SC2611			
Q704	8-729-326-11	2SC2611			
Q705	8-729-326-11	2SC2611			
Q706	8-729-326-11	2SC2611			
Q707	8-729-200-17	2SA1091-O			
Q708	8-729-200-17	2SA1091-O			
Q709	8-729-200-17	2SA1091-O			
Q710	8-729-119-78	2SC2785-HFE			
Q711	8-729-119-78	2SC2785-HFE			
Q712	8-729-119-78	2SC2785-HFE			
Q714	8-729-255-12	2SC2551-O			
Q1800	8-729-119-76	2SA1175-HFE			
Q1802	8-729-119-78	2SC2785-HFE			
		<RESISTOR>			
R701	1-219-752-11	CARBON	100K	5%	1/2W
R705	1-216-392-11	METAL OXIDE	1.8	5%	3W
R710	1-215-923-00	METAL OXIDE	10K	5%	3W
R711	1-260-330-11	CARBON	1.5K	5%	1/2W
R712	1-215-923-00	METAL OXIDE	10K	5%	3W
R713	1-260-330-11	CARBON	1.5K	5%	1/2W
R714	1-215-923-00	METAL OXIDE	10K	5%	3W
R715	1-260-330-11	CARBON	1.5K	5%	1/2W
R716	1-249-405-11	CARBON	100	5%	1/4W
R717	1-249-405-11	CARBON	100	5%	1/4W
R718	1-249-405-11	CARBON	100	5%	1/4W
R719	1-215-469-00	METAL	100K	1%	1/4W
R720	1-249-923-11	CARBON	1K	5%	1/4W
R722	1-249-923-11	CARBON	1K	5%	1/4W
R723	1-215-485-00	METAL	470K	1%	1/4W
R724	1-249-923-11	CARBON	1K	5%	1/4W
R725	1-249-424-11	CARBON	3.9K	5%	1/4W
R726	1-249-424-11	CARBON	3.9K	5%	1/4W
R727	1-249-424-11	CARBON	3.9K	5%	1/4W
R728	1-249-408-11	CARBON	180	5%	1/4W
R729	1-249-408-11	CARBON	180	5%	1/4W
R730	1-249-408-11	CARBON	180	5%	1/4W
R731	1-249-401-11	CARBON	47	5%	1/4W
R732	1-249-401-11	CARBON	47	5%	1/4W
R733	1-249-401-11	CARBON	47	5%	1/4W
R734	1-219-743-11	CARBON	100	5%	1/2W
R738	1-247-807-31	CARBON	100	5%	1/4W
R739	1-247-807-31	CARBON	100	5%	1/4W
R740	1-247-807-31	CARBON	100	5%	1/4W
R747	1-215-926-00	METAL OXIDE	33K	5%	3W
R749	1-215-927-00	METAL OXIDE	47K	5%	3W
R751	1-216-490-11	METAL OXIDE	39K	5%	3W
R753	1-249-429-11	CARBON	10K	5%	1/4W
R755	1-249-427-11	CARBON	6.8K	5%	1/4W
R756	1-249-427-11	CARBON	6.8K	5%	1/4W

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

C6 F H

REF NO.	PART NO.	DESCRIPTION			REMARK
R757	1-249-427-11	CARBON	6.8K	5%	1/4W
R758	1-249-419-11	CARBON	1.5K	5%	1/4W
R759	1-249-419-11	CARBON	1.5K	5%	1/4W
R760	1-249-419-11	CARBON	1.5K	5%	1/4W
R1800	1-249-417-11	CARBON	1K	5%	1/4W
R1801	1-249-426-11	CARBON	5.6K	5%	1/4W
R1802	1-249-387-11	CARBON	3.3	5%	1/4W
R1803	1-249-387-11	CARBON	3.3	5%	1/4W
R1805	1-249-429-11	CARBON	10K	5%	1/4W
R1806	1-249-425-11	CARBON	4.7K	5%	1/4W
R1808	1-249-425-11	CARBON	4.7K	5%	1/4W
R1809	1-249-435-11	CARBON	33K	5%	1/4W
R1810	1-249-435-11	CARBON	33K	5%	1/4W
R1811	1-249-435-11	CARBON	33K	5%	1/4W
R1812	1-249-435-11	CARBON	33K	5%	1/4W
R1821	1-249-435-11	CARBON	33K	5%	1/4W
R1822	1-249-435-11	CARBON	33K	5%	1/4W
R1823	1-249-426-11	CARBON	5.6K	5%	1/4W
R1824	1-249-435-11	CARBON	33K	5%	1/4W
R1825	1-247-843-11	CARBON	3.3K	5%	1/4W
		<VARIABLE RESISTOR>			
RV702	1-241-656-11	RES, ADJ, METAL FILM 110M			
RV1801	1-238-019-11	RES, ADJ, CARBON 47K			
**********					
	* A-1241-484-A	F BOARD MOUNTED (KV-XA25M80/XA25M83)			
	* A-1241-452-A	F BOARD MOUNTED (KV-XA25N90)			
		**********			
	1-533-223-11	CLIP, FUSE			
	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE			
		<CAPACITOR>			
C654	⚠ 1-117-703-11	CERAMIC	0.0047UF	99%	250V
C4601	⚠ 1-104-708-11	MYLAR	0.47UF	20.00%	250V
C4602	⚠ 1-109-835-11	MYLAR	0.68UF	20.00%	250V
		<CONNECTOR>			
CN4601	1-580-843-11	PIN, CONNECTOR (POWER)			
CN4602	1-580-843-11	PIN, CONNECTOR (POWER)			
CN4603	1-695-915-11	TAB (CONTACT)			
		<FUSE>			
F4601	⚠ 1-532-299-00	FUSE, TIME-LAG 5A/250V			
		<RESISTOR>			
R4601	⚠ 1-202-719-00	SOLID	1M	10%	1/2W
		<TRANSFORMER>			
T4601	⚠ 1-424-505-11	COIL, LINE FILTER (KV-XA25M80/XA25M83)			
T4601	⚠ 1-424-505-11	TRANSFORMER, LINE FILTER (KV-XA25N90)			
T4602	⚠ 1-431-182-11	TRANSFORMER, LINE FILTER			

REF NO.	PART NO.	DESCRIPTION			REMARK
		<VARISTOR>			
VDR461	1-803-830-11	VARISTOR (ERZV14D621) (KV-XA25M80/XA25M83)			
******	*	**********			
	* A-1372-972-A	H BOARD MOUNTED (KV-XA25M80)			
	* A-1372-988-A	H BOARD MOUNTED (KV-XA25M83)			
	* A-1372-915-A	H BOARD MOUNTED (KV-XA25N90)			
		**********			
	*4-055-304-01	HOLDER, LED			
	*4-560-030-01	FILM, CONDUCTIVE			
		<CAPACITOR>			
C3900	1-136-153-00	FILM	0.01UF	5.00%	50V
C3902	1-136-153-00	FILM	0.01UF	5.00%	50V
C3904	1-104-664-11	ELECT	47UF	20.00%	25V
C3905	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3906	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3907	1-136-175-00	FILM (KV-XA25M83 ONLY)	0.68UF	5.00%	50V
C3910	1-104-660-91	ELECT	47UF	20.00%	16V
C3911	1-104-660-91	ELECT	47UF	20.00%	16V
C3912	1-102-114-00	CERAMIC	470PF	10.00%	50V
C3913	1-126-960-11	ELECT	1UF	20.00%	50V
		<CONNECTOR>			
CN3601	* 1-580-844-11	PIN, CONNECTOR (POWER)			
CN3602	* 1-580-844-11	PIN, CONNECTOR (POWER)			
CN3901	* 1-564-507-11	PLUG, CONNECTOR 4P			
CN3902	1-564-509-11	PLUG, CONNECTOR 6P			
CN3903	* 1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M83 ONLY)			
CN3904	* 1-564-512-11	PLUG, CONNECTOR 9P			
CN3905	* 1-564-512-11	PLUG, CONNECTOR 9P			
CN3906	* 1-564-506-11	PLUG, CONNECTOR 3P (KV-XA25M83 ONLY)			
		<DIODE>			
D3900	8-719-070-16	NNCD9.1A-T1			
D3901	8-719-070-16	NNCD9.1A-T1			
D3905	8-719-070-16	NNCD9.1A-T1			
D3906	8-719-083-18	SPB-25MVWF			
D3907	8-719-070-16	NNCD9.1A-T1			
D3908	8-719-070-16	NNCD9.1A-T1			
		<IC>			
IC3901	8-742-014-21	SBX1981-51(21) (KV-XA25N90)			
IC3901	8-742-134-01	SBX1981-51RP (KV-XA25M80/XA25M83)			
		<JACK>			
J3901	1-750-264-11	JACK			
J3902	1-784-646-11	TERMINAL, S			
J3903	1-770-329-11	JACK, PIN 3P			

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

J1 J H

REF NO.	PART NO.	DESCRIPTION			REMARK
		<COIL>			
L3901	1-414-183-41	INDUCTOR	10UH		
L3902	1-414-183-41	INDUCTOR	10UH		
L3903	1-406-976-11	INDUCTOR (KV-XA25M83 ONLY)	68UH		
		<TRANSISTOR>			
Q3901	8-729-030-02	DTC144ESA			
Q3902	8-729-030-02	DTC144ESA			
		<RESISTOR>			
R3900	1-249-411-11	CARBON	330	5%	1/4W
R3901	1-249-411-11	CARBON	330	5%	1/4W
R3902	1-247-804-11	CARBON	75	5%	1/4W
R3904	1-249-429-11	CARBON	10K	5%	1/4W
R3905	1-249-429-11	CARBON	10K	5%	1/4W
R3907	1-249-426-11	CARBON	5.6K	5%	1/4W
R3908	1-249-413-11	CARBON	470	5%	1/4W
R3909	1-249-417-11	CARBON	1K	5%	1/4W
R3910	1-249-420-11	CARBON	1.8K	5%	1/4W
R3911	1-249-411-11	CARBON	330	5%	1/4W
R3912	1-247-843-11	CARBON	3.3K	5%	1/4W
R3913	1-249-429-11	CARBON	10K	5%	1/4W
R3914	1-249-411-11	CARBON	330	5%	1/4W
R3915	1-249-429-11	CARBON	10K	5%	1/4W
R3916	1-249-401-11	CARBON	47	5%	1/4W
R3917	1-247-804-11	CARBON	75	5%	1/4W
R3918	1-249-409-11	CARBON	220	5%	1/4W
R3919	1-249-409-11	CARBON	220	5%	1/4W
R3920	1-247-807-31	CARBON	100	5%	1/4W
R3921	1-247-807-31	CARBON	100	5%	1/4W
R3922	1-249-421-11	CARBON	2.2K	5%	1/4W
		<SWITCH>			
S3601 ⚠	1-571-433-21	SWITCH, PUSH (AC POWER)			
S3902	1-692-431-21	SWITCH, TACTILE			
S3903	1-692-431-21	SWITCH, TACTILE			
S3904	1-692-431-21	SWITCH, TACTILE			
S3905	1-692-431-21	SWITCH, TACTILE			
S3906	1-692-431-21	SWITCH, TACTILE			
S3907	1-692-431-21	SWITCH, TACTILE			
S3908	1-692-431-21	SWITCH, TACTILE			

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* A-1388-321-A J BOARD MOUNTED (KV-XA25M83)
****

		<CAPACITOR>			
C2410	1-126-967-11	ELECT	47UF	20.00%	50V
C2411	1-126-967-11	ELECT	47UF	20.00%	50V
C2412	1-126-967-11	ELECT	47UF	20.00%	50V
C2413	1-102-112-00	CERAMIC	330PF	10.00%	50V
C2414	1-102-112-00	CERAMIC	330PF	10.00%	50V
C2418	1-126-960-11	ELECT	1UF	20.00%	50V
C2419	1-126-960-11	ELECT	1UF	20.00%	50V
		<CONNECTOR>			
CN2410*	1-564-523-11	PLUG, CONNECTOR 8P			
CN3451*	1-564-518-11	PLUG, CONNECTOR 3P			
		<DIODE>			
D2410	8-719-070-16	NNCD9.1A-T1			
D2411	8-719-070-16	NNCD9.1A-T1			
D2412	8-719-070-16	NNCD9.1A-T1			
D2414	8-719-070-16	NNCD9.1A-T1			
D2415	8-719-070-16	NNCD9.1A-T1			
D3453	8-719-110-72	RD30ESB2			
D3454	8-719-110-72	RD30ESB2			
		<JACK>			
J2410	1-784-623-11	BLOCK, PIN JACK 5P			
J3451	1-694-467-11	TERMINAL, PUSH (2P)			
		<RESISTOR>			
R2410	1-247-804-11	CARBON	75	5%	1/4W
R2411	1-247-804-11	CARBON	75	5%	1/4W
R2412	1-247-804-11	CARBON	75	5%	1/4W
R2414	1-247-887-00	CARBON	220K	5%	1/4W
R2415	1-247-807-31	CARBON	100	5%	1/4W
R2417	1-247-887-00	CARBON	220K	5%	1/4W
R2418	1-247-807-31	CARBON	100	5%	1/4W
R2419	1-249-409-11	CARBON	220	5%	1/4W
R2420	1-249-409-11	CARBON	220	5%	1/4W
R2421	1-249-409-11	CARBON	220	5%	1/4W

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* A-1388-316-A J1 BOARD MOUNTED (KV-XA25M80)
* A-1388-301-A J1 BOARD MOUNTED (KV-XA25N90)
****

		<CAPACITOR>			
C2410	1-126-967-11	ELECT	47UF	20.00%	50V
C2411	1-126-967-11	ELECT	47UF	20.00%	50V
C2412	1-126-967-11	ELECT	47UF	20.00%	50V
C2413	1-102-112-00	CERAMIC	330PF	10.00%	50V
C2414	1-102-112-00	CERAMIC	330PF	10.00%	50V
C2418	1-126-960-11	ELECT	1UF	20.00%	50V
C2419	1-126-960-11	ELECT	1UF	20.00%	50V
		<CONNECTOR>			
CN2410*	1-564-523-11	PLUG, CONNECTOR 8P			
		<DIODE>			
D2410	8-719-929-15	HZS9.1NB2			
D2411	8-719-929-15	HZS9.1NB2			
D2412	8-719-929-15	HZS9.1NB2			
D2414	8-719-929-15	HZS9.1NB2			
D2415	8-719-929-15	HZS9.1NB2			

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

J1 VM1

REF NO.	PART NO.	DESCRIPTION			REMARK
		<JACK>			
J2410	1-784-623-11	BLOCK, PIN JACK 5P			
		<RESISTOR>			
R2410	1-247-804-11	CARBON	75	5%	1/4W
R2411	1-247-804-11	CARBON	75	5%	1/4W
R2412	1-247-804-11	CARBON	75	5%	1/4W
R2414	1-247-887-00	CARBON	220K	5%	1/4W
R2415	1-247-807-31	CARBON	100	5%	1/4W
R2417	1-247-887-00	CARBON	220K	5%	1/4W
R2418	1-247-807-31	CARBON	100	5%	1/4W
R2419	1-249-409-11	CARBON	220	5%	1/4W
R2420	1-249-409-11	CARBON	220	5%	1/4W
R2421	1-249-409-11	CARBON	220	5%	1/4W
******	*	**********			
	* A-1342-610-A	VM1 BOARD MOUNTED (KV-XA25M80/XA25M83)			
	* A-1342-590-A	VM1 BOARD MOUNTED (KV-XA25N93)			
		**********			
	* 4-363-146-71	HEAT SINK, V.OUT			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C5900	1-102-115-00	CERAMIC	560PF	10.00%	50V
C5902	1-104-661-91	ELECT	330UF	20.00%	16V
C5903	1-161-830-00	CERAMIC	0.0047UF		500V
C5905	1-126-935-11	ELECT	470UF	20.00%	10V
C5906	1-130-491-00	MYLAR	0.047UF	5.00%	50V
C5907	1-107-638-11	ELECT	33UF	20.00%	160V
C5908	1-106-383-00	MYLAR	0.047UF	10.00%	200V
C5909	1-126-933-11	ELECT	100UF	20.00%	16V
C5910	1-130-471-00	MYLAR	0.001UF	5.00%	50V
C5911	1-107-949-11	ELECT	2.2UF	20.00%	160V
C5912	1-104-999-11	MYLAR	0.1UF	10.00%	200V
C5913	1-130-471-00	MYLAR	0.001UF	5.00%	50V
C5914	1-126-933-11	ELECT	100UF	20.00%	16V
C5916	1-130-491-00	MYLAR	0.047UF	5.00%	50V
C5917	1-126-935-11	ELECT	470UF	20.00%	10V
C5918	1-102-244-00	CERAMIC	220PF	10.00%	500V
C5919	1-136-165-00	FILM	0.1UF	5.00%	50V
		<CONNECTOR>			
CN5901*	1-564-510-11	PLUG, CONNECTOR 7P			
CN5904*	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P			
		<DIODE>			
D5901	8-719-911-19	1SS119-25			
D5902	8-719-110-88	RD39ES-B2			
D5903	8-719-911-19	1SS119-25			
D5904	8-719-110-88	RD39ES-B2			
D5905	8-719-911-19	1SS119-25			
D5906	1-249-406-11	CARBON	120	5%	1/4W
D5907	1-249-406-11	CARBON	120	5%	1/4W

REF NO.	PART NO.	DESCRIPTION			REMARK
		<COIL>			
L5901	1-414-187-11	INDUCTOR	47UH		
		<TRANSISTOR>			
Q5901	8-729-230-45	2SC2458-YGR			
Q5902	8-729-809-26	2SA1606-E			
Q5903	8-729-230-45	2SC2458-YGR			
Q5904	8-729-119-76	2SA1175-HFE			
Q5905	8-729-230-45	2SC2458-YGR			
Q5906	8-729-809-29	2SC4159-E			
Q5907	8-729-230-45	2SC2458-YGR			
		<RESISTOR>			
R5901	1-249-401-11	CARBON	47	5%	1/4W
R5902	1-249-414-11	CARBON	560	5%	1/4W
R5903	1-247-734-11	CARBON	39	5%	1/2W
R5904	1-249-411-11	CARBON	330	5%	1/4W
R5905	1-249-417-11	CARBON	1K	5%	1/4W
R5906	1-249-417-11	CARBON	1K	5%	1/4W
R5907	1-249-417-11	CARBON	1K	5%	1/4W
R5908	1-249-383-11	CARBON	1.5	5%	1/4W
R5909	1-249-409-11	CARBON	220	5%	1/4W
R5910	1-249-403-11	CARBON	68	5%	1/4W
R5911	1-249-439-11	CARBON	68K	5%	1/4W
R5912	1-249-437-11	CARBON	47K	5%	1/4W
R5914	1-249-403-11	CARBON	68	5%	1/4W
R5915	1-249-429-11	CARBON	10K	5%	1/4W
R5916	1-249-419-11	CARBON	1.5K	5%	1/4W
R5917	1-249-416-11	CARBON	820	5%	1/4W
R5918	1-249-429-11	CARBON	10K	5%	1/4W
R5919	1-249-417-11	CARBON	1K	5%	1/4W
R5920	1-249-439-11	CARBON	68K	5%	1/4W
R5921	1-216-476-11	METAL OXIDE	180	5%	3W
R5922	1-249-414-11	CARBON	560	5%	1/4W
R5923	1-249-383-11	CARBON	1.5	5%	1/4W
R5925	1-249-400-11	CARBON	39	5%	1/4W
R5927	1-249-416-11	CARBON	820	5%	1/4W
R5929	1-215-880-00	METAL OXIDE	10	5%	2W
**********					
		MISCELLANEOUS			
		**********			
	1-544-906-11	SPEAKER (10CM) (KV-XA25M83 ONLY)			
	1-251-374-32	CAP ASSY, HIGH-VOLTAGE (KV-XA25M80/XA25M83)			
	1-251-374-22	CAP ASSY, HIGH-VOLTAGE (KV-XA25N90)			
⚠	1-419-322-11	COIL, DEGAUSSING			
	1-452-896-61	COIL, NA ROTATION (RT-200)			
⚠	1-451-475-11	DEFLECTION YOKE (Y25RSA)			
	1-452-094-00	CIRCULAR DISC MAGNET B			
	1-452-032-00	MAGNET,DISC			
	1-503-902-11	SPEAKER (15X6.5 CM)			
	1-529-190-11	SPEAKER (5CM)			
	1-529-246-21	SPEAKER, LOUD (15X6.5CM) (KV-XA25M80/XA25M83)			

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF NO.	PART NO.	DESCRIPTION	REMARK
	⚠ 1-574-062-11	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-XA25M80/XA25M83)	
	⚠ 1-575-023-11	CORD, POWER (WITH CONNECTOR) 6A/250V (KV-XA25N90)	
	1-573-657-21	PLUG, F-PIN (KV-XA25N90)	
	8-453-011-21	NA299-S	
	⚠ 8-733-250-05	PICTURE TUBE (A60LPN70X)	

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ACCESSORIES AND PACKING MATERIALS
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	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)	
*	4-071-725-01	BAG, PROTECTION (KV-XA25M80/XA25M83)	
*	4-029-168-01	BAG, PROTECTION (KV-XA25N90)	
*	4-082-448-01	CUSHION (LOWER)(ASSY) (KV-XA25M80/XA25M83)	
*	4-081-561-01	CUSHION (LOWER) (ASSY) (KV-XA25N90)	
*	4-082-451-01	CUSHION (UPPER)(ASSY) (KV-XA25M80/XA25M83)	
*	4-081-560-01	CUSHION (UPPER) (ASSY) (KV-XA25N90)	
*	4-082-489-01	INDIVIDUAL CARTON (KV-XA25M80/XA25M83)	
*	4-081-886-01	INDIVIDUAL CARTON (KV-XA25N90)	
	4-080-853-21	MANUAL, INSTRUCTION (KV-XA25M80/XA25M83)	
	4-078-793-81	MANUAL, INSTRUCTION (KV-XA25N90)	
	4-392-003-51	BAND, HOLD (KV-XA25M80/XA25M83)	
	4-392-003-11	BAND, HOLD (KV-XA25N90)	
*	4-068-528-21	FOOT (KV-XA25M83 ONLY)	
*	4-080-405-02	3D BOX, TOP (KV-XA25M83 ONLY)	
*	4-080-406-02	DUCT, SPEAKER (KV-XA25M83 ONLY)	

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REMOTE COMMANDER
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1-418-460-11	REMOTE COMMANDER (RM-914) (KV-XA25M80/XA25M83)	
9-933-895-01	BATEERY COVER REMOTE COMMANDER (KV-XA25M80/XA25M83)	
1-418-038-12	REMOTE COMMANDER (RM-914) (KV-XA25N90)	
4-080-852-01	BATEERY COVER REMOTE COMMANDER (KV-XA25N90)	

Sony Corporation
Sony Technology Malaysia Sdn. Bhd.
Visual Entertainment General Area

9-872-250-01

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